Kangtai Electric Co., Ltd.

SAR COMPLIANCE REPORT

Report Type:
FCC SAR assessment report

Model:
50182USA, 50183USA, 50184USA, 50185USA

REPORT NUMBER:
2306A0095SHA-002

ISSUE DATE:
August 28, 2023

DOCUMENT CONTROL NUMBER:
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TEST REPORT

Report no.: 2306A0095SHA-002

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:	RHT182

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:	**REVIEWED BY:**
Justin Wu	
Project Engineer Justin Wu	Reviewer Wakeyou Wang

TEST REPORT

Revision History

Report No.	Version	Description	Issued Date
2306A0095SHA-002	Rev. 01	Initial issue of report	August 28, 2023

TEST REPORT

1 GENERAL INFORMATION

1.1 Description of Equipment Under Test (EUT)

Product Name:	Transmitter
Model:	50182USA, 50183USA, 50184USA, 50185USA
Description of EUT:	The product is a transmitter. It works at 433.92MHz Frequency. There are four models, they are same except the model name. We test 50183USA and list the result in this report.
Rating:	3Vdc, 20mA, Class III
Category of EUT:	Class B
EUT type:	☒ Table top ☐ Floor standing
Software Version:	/
Hardware Version:	/
Sample number:	0230605-02-002
Sample received date:	June 05, 2023
Date of test:	June 05, 2023 ~ June 16, 2023

1.2 Technical Specification

Operation Frequency:	433.92MHz
Type of Modulation:	ASK
Product Type:	☐ Mobile ☒ Portable ☐ Fix Location
Channel Number:	1
Antenna Designation:	PCB antenna

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 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:

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

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

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 2306A0095SHA-001:

The highest EIRP adjusted with tune-up tolerance is: 78.7-95.3 = -16.6dBm=0.022mW
0.022mW < 22mW (Test Exclusion Thresholds of 450MHz at 5mm). Therefore, the SAR requirement is deemed to be satisfied without test.

********** END **********