TEST REPORT

Applicant:	Shenzhen SEI Robotics Co., Ltd.
Address:	11th Floor, Kangtai Group Building, No. 222 Kefa Road, Science and Technology Park Community, Yuehai Street, Nanshan District, Shenzhen
Equipment Type:	STB
Model Name:	ADT-5 (refer to section 2.3)
Brand Name:	N/A
FCC ID:	2AOVU-ADT-5
Test Standard:	47 CFR Part 2.1091 KDB 447498 D04 v01
Sample Arrival Date:	Aug. 12, 2026
Test Date:	Sep. 07, 2026
Date of Issue:	Oct. 13, 2026

ISSUED BY:

Shenzhen BALUN Technology Co., Ltd.

Tested by: Xu Rui **Checked by:** Zong Liyao **Approved by:** Liao Jianming (Technical Director)

Revision History

Version	Issue Date	Revisions Content
Rev. 01	Oct. 13, 2026	Initial Issue

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1 GENERAL INFORMATION

1.1 Test Laboratory

Name	Shenzhen BALUN Technology Co., Ltd.
Address	601, Building 2, Intelligent Connected Vehicle Industrial Park, No.55, Xiangshan Road, Luotian Community, Yanluo Sub-district, Bao'an District, Shenzhen
Phone Number	+86 755 6685 0100

1.2 Test Location

Name	Shenzhen BALUN Technology Co., Ltd.
Location	☐ Building 2, Intelligent Connected Vehicle Industrial Park, No.55, Xiangshan Road, Luotian Community, Yanluo Sub-district, Bao'an District, Shenzhen, Guangdong
	☑ 1/F., Building B, Ganghongji High-Tech Intelligent Industrial Park, No.1008, Songbai Road, Yangguang Community, Xili Subdistrict, Nanshan District, Shenzhen, Guangdong
Accreditation Certificate	The laboratory is a testing organization accredited by FCC as a accredited testing laboratory. The designation number is CN1196.

2 PRODUCT INFORMATION

2.1 Applicant Information

Applicant	Shenzhen SEI Robotics Co., Ltd.
Address	11th Floor, Kangtai Group Building, No. 222 Kefa Road, Science and Technology Park Community, Yuehai Street, Nanshan District, Shenzhen

2.2 Manufacturer Information

Manufacturer	Shenzhen SEI Robotics Co., Ltd.
Address	11th Floor, Kangtai Group Building, No. 222 Kefa Road, Science and Technology Park Community, Yuehai Street, Nanshan District, Shenzhen

2.3 General Description for Equipment under Test (EUT)

EUT Name	STB
Model Name Under Test	ADT-5
Series Model Name	SN8BWXX(X=A,B,C...X,Y,Z)
Description of Model name differentiation	All models are same with electrical parameters and internal circuit structure, but only differ Model Name and Colours. (this information provided by the applicant)
Hardware Version	SMB.548.04
Software Version	N/A
Dimensions (Approx.)	N/A
Weight (Approx.)	N/A

2.4 Technical Information

Network and Wireless connectivity	Bluetooth (BR+EDR+BLE) WIFI 802.11a, 802.11b, 802.11g, 802.11n, 802.11ac and 802.11ax

The requirement for the following technical information of the EUT was tested in this report:

Operating Mode	WIFI, Bluetooth	
Frequency Range	802.11b/g	2412 ~ 2462 MHz
	802.11n(HT20/HT40)	2412 ~ 2462 MHz
	802.11ax(HE20/HE40)	2412 ~ 2462 MHz
	802.11a	5150 ~ 5250 MHz
		5250 ~ 5350 MHz
		5470 ~ 5725 MHz
		5725 ~ 5850 MHz
	802.11n(HT20/HT40)	5150 ~ 5250 MHz
		5250 ~ 5350 MHz
		5470 ~ 5725 MHz
		5725 ~ 5850 MHz
	802.11ac (VHT20/VHT40/VHT80)	5150 ~ 5250 MHz
		5250 ~ 5350 MHz
		5470 ~ 5725 MHz
		5725 ~ 5850 MHz
	802.11ax (HE20/HE40/HE80)	5150 ~ 5250 MHz
		5250 ~ 5350 MHz
		5470 ~ 5725 MHz
		5725 ~ 5850 MHz
	Bluetooth	2402 ~ 2480 MHz
Antenna Type	WIFI	FPC Antenna
	Bluetooth	FPC Antenna
Exposure Category	General Population/Uncontrolled Exposure	
Product Type	Mobile Device	

3 SUMMARY OF TEST RESULT

3.1 Test Standards

No.	Identity	Document Title
1	KDB 447498 D04 v01	447498 D04 Interim General RF Exposure Guidance v01

3.2 Limit Standards

No.	Identity	Document Title
1	47 CFR Part 2.1091	Radiofrequency radiation exposure evaluation: mobile devices

4 DEVICE CATEGORY AND LEVELS LIMITS

Mobile Devices:

CFR Title 47 §2.1091(b)

For purposes of this section, a mobile device is defined as a transmitting device designed to be used in other than fixed locations and to generally be used in such a way that a separation distance of at least 20 centimeters is normally maintained between the transmitter's radiating structure(s) and the body of the user or nearby persons.

FCC KDB 447498 D04 General RF Exposure Guidance v01 Limit

Evaluation of compliance with the exposure limits in § 1.1310 is necessary if the ERP of the device is greater than ERP20cm in Formula (B.1) [repeated from § 2.1091(c)(1) and § 1.1307(b)(1)(i)(B)].

$$P_{\text{th}}\ (\text{mW}) = ERP_{20\ \text{cm}}\ (\text{mW}) = \begin{cases} 2040f & 0.3\ \text{GHz} \le f < 1.5\ \text{GHz} \\ 3060 & 1.5\ \text{GHz} \le f \le 6\ \text{GHz} \end{cases} \qquad (\text{B.1})$$

If the ERP is not easily obtained, then the available maximum time-averaged power may be used (i. e., without consideration of ERP only if the physical dimensions of the radiating structure(s) do not exceed the electrical length of λ/4 or if the antenna gain is less than that of a half-wave dipole.

SAR-based exemptions are constant at separation distances between 20 cm and 40 cm to avoid discontinuities in the threshold when transitioning between SAR-based and MPE-based exemption criteria at 40 cm, considering the importance of reflections.

The SAR-based exemption formula of § 1.1307(b)(3)(i)(B), repeated here as Formula (B.2), applies for single fixed, mobile, and portable RF sources with available maximum time-averaged power or effective radiated power (ERP), whichever is greater, of less than or equal to the threshold Pth (mW).

This method shall only be used at separation distances from 0.5 cm to 40 cm and at frequencies from 0.3 GHz to 6 GHz (inclusive). Pth is given by Formula (B.2).

$$P_{\text{th}}\ (\text{mW}) = \begin{cases} ERP_{20\ \text{cm}}(d/20\ \text{cm})^x & d \le 20\ \text{cm} \\ ERP_{20\ \text{cm}} & 20\ \text{cm} < d \le 40\ \text{cm} \end{cases} \qquad (\text{B.2})$$

where

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

and f is in GHz, d is the separation distance (cm), and $ERP_{20\text{cm}}$ is per Formula (B.1). The example values shown in Table B.2 are for illustration only.

Table B.2—Example Power Thresholds (mW)

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

5 ASSESSMENT RESULT

5.1 Output Power

Mode	Bluetooth	2.4G WIFI-ANT1	2.4G WIFI-ANT2	2.4G WIFI-MIMO	/	/
Conducted Power (dBm)	11.19	18.48	18.39	21.45	/	/
Antenna Gain (dBi)	2.22	2.30	2.12	5.22	/	/
EIRP (dBm)	13.41	20.78	20.51	26.67	/	/
Mode	5.2G WIFI-ANT1	5.2G WIFI-ANT2	5.2G WIFI-MIMO	5.3G WIFI-ANT1	5.3G WIFI-ANT2	5.3G WIFI-MIMO
Conducted Power (dBm)	19.02	19.43	22.24	19.65	18.93	22.31
Antenna Gain (dBi)	2.09	1.65	4.88	1.68	1.97	4.84
EIRP (dBm)	21.11	21.08	27.12	21.33	20.90	27.15
Mode	5.6G WIFI-ANT1	5.6G WIFI-ANT2	5.6G WIFI-MIMO	5.8G WIFI-ANT1	5.8G WIFI-ANT2	5.8G WIFI-MIMO
Conducted Power (dBm)	19.59	19.05	22.25	19.59	19.46	22.53
Antenna Gain (dBi)	2.39	2.71	5.56	2.87	2.60	5.75
EIRP (dBm)	21.98	21.76	27.81	22.46	22.06	28.28
Note: This report listed the worst case conducted power value, please refer to Ti-EE26080371-601, Ti-EE26080371-602, Ti-EE26080371-603, Ti-EE26080371-604 report for more details.						

5.2 Tune-up power

Mode	Conducted Power Range (dBm)	EIRP Range (dBm)	ERP Range (dBm)
Bluetooth	[9.50, 11.50]	[11.72, 13.72]	[9.57, 11.57]
2.4G WIFI-ANT1	[16.50, 18.50]	[18.80, 20.80]	[16.65, 18.65]
2.4G WIFI-ANT2	[16.50, 18.50]	[18.62, 20.62]	[16.47, 18.47]
2.4G WIFI-MIMO	[19.50, 21.50]	[24.72, 26.72]	[22.57, 24.57]
5.2G WIFI-ANT1	[17.50, 19.50]	[19.59, 21.59]	[17.44, 19.44]
5.2G WIFI-ANT2	[17.50, 19.50]	[19.15, 21.15]	[17.00, 19.00]
5.2G WIFI-MIMO	[20.50, 22.50]	[25.38, 27.38]	[23.23, 25.23]
5.3G WIFI-ANT1	[18.00, 20.00]	[19.68, 21.68]	[17.53, 19.53]
5.3G WIFI-ANT2	[17.00, 19.00]	[18.97, 20.97]	[16.82, 18.82]
5.3G WIFI-MIMO	[20.50, 22.50]	[25.34, 27.34]	[23.19, 25.19]
5.6G WIFI-ANT1	[18.00, 20.00]	[20.39, 22.39]	[18.24, 20.24]
5.6G WIFI-ANT2	[17.50, 19.50]	[20.21, 22.21]	[18.06, 20.06]
5.6G WIFI-MIMO	[20.50, 22.50]	[26.06, 28.06]	[23.91, 25.91]
5.8G WIFI-ANT1	[18.00, 20.00]	[20.87, 22.87]	[18.72, 20.72]
5.8G WIFI-ANT2	[17.50, 19.50]	[20.10, 22.10]	[17.95, 19.95]
5.8G WIFI-MIMO	[21.00, 23.00]	[26.75, 28.75]	[24.60, 26.60]

Note1: ERP= EIRP -2.15dB.

Note2: According KDB 447498 D04, used the greater of maximum conducted power and ERP to compare with the threshold value Pth.

5.3 RF Exposure Evaluation Result

Evaluation Mode	Maximum Power (dBm)	Maximum Power (mw)	Distance (mm)	Threshold Power (mW)	Power / Limit	Verdict
Bluetooth	11.57	14.35	200	3060.00	0.005	Pass
2.4G WIFI-ANT1	18.65	73.28	200	3060.00	0.024	Pass
2.4G WIFI-ANT2	18.50	70.79	200	3060.00	0.023	Pass
2.4G WIFI-MIMO	24.57	286.42	200	3060.00	0.094	Pass
5.2G WIFI-ANT1	19.50	89.13	200	3060.00	0.029	Pass
5.2G WIFI-ANT2	19.50	89.13	200	3060.00	0.029	Pass
5.2G WIFI-MIMO	25.23	333.43	200	3060.00	0.109	Pass
5.3G WIFI-ANT1	20.00	100.00	200	3060.00	0.033	Pass
5.3G WIFI-ANT2	19.00	79.43	200	3060.00	0.026	Pass
5.3G WIFI-MIMO	25.19	330.37	200	3060.00	0.108	Pass
5.6G WIFI-ANT1	20.24	105.68	200	3060.00	0.035	Pass
5.6G WIFI-ANT2	20.06	101.39	200	3060.00	0.033	Pass
5.6G WIFI-MIMO	25.91	389.94	200	3060.00	0.127	Pass
5.8G WIFI-ANT1	20.72	118.03	200	3060.00	0.039	Pass
5.8G WIFI-ANT2	19.95	98.86	200	3060.00	0.032	Pass
5.8G WIFI-MIMO	26.60	457.09	200	3060.00	0.149	Pass

5.4 Collocated Power Calculation

Evaluation Mode	Power / Limit	Σ(Power / Limit) of Bluetooth + 2.4G WIFI	Verdict
Bluetooth	0.005	0.099	Pass
2.4G WIFI	0.094		
Evaluation Mode	Power / Limit	Σ(Power / Limit) of Bluetooth + 5G WIFI	Verdict
Bluetooth	0.005	**0.154**	Pass
5G WIFI	0.149		

Note:

1. Σ(Power / Limit): This is a summation of [(power for each transmitter/ antenna included in the simultaneous transmission)/ (corresponding Power limit)], for Bluetooth + 5G WIFI.
2. Both of the 2.4GHz/5GHz can transmit simultaneously, the formula of calculated the Power is
   CP1 / LP1 + CP2 / LP2 + ……etc. < 1
   CP = Calculation power
   LP = Limit of power
3. The worst-case situation is 0.154, which is less than “1”. This confirmed that the device comply with FCC KDB 447498 D04 Power limit.
4. The DUT work frequency range used is 2402 MHz ~ 2480 MHz and 5725 MHz ~ 5850 MHz the result close to the limit by the above formula, so we select worst case power to calculate the exclusion power threshold.

5.5 Conclusion

This EUT is deemed to comply with the reference level limits, therefore the basic restrictions are compliant with human exposure limits.

Statement

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--END OF REPORT--