

RF Exposure Evaluation Report

Product : Intelligent in-vehicle host
Trade mark :  KANDI
Model/Type reference : KL3684320
Serial Number : N/A
Report Number : EED32O81356305
FCC ID : 2A8M8-K32
Date of Issue : Dec. 06, 2022
Test Standards : 47 CFR Part 1.1307
47 CFR Part 2.1093
KDB447498 D04 Interim General RF
Exposure Guidance v01
Test result : PASS

Prepared for:

SC Autosports, LLC
8050 Forest Lane Dallas, TX 75243

Prepared by:

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2 Version

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4 General Information

4.1 Client Information

Applicant:	SC Autosports, LLC
Address of Applicant:	8050 Forest Lane Dallas,TX 75243
Manufacturer:	SC Autosports, LLC
Address of Manufacturer:	8050 Forest Lane Dallas,TX 75243
Factory:	SC Autosports, LLC
Address of Factory:	8050 Forest Lane Dallas,TX 75243

4.2 General Description of EUT

Product Name:	Intelligent in-vehicle host
Model No.(EUT):	KL3684320
Trade Mark:	 KANDI

4.3 Product Specification subjective to this standard

Frequency Range:	BLE/BT: 2402MHz~2480MHz 2.4G WIFI: IEEE 802.11b/g/n(HT20): 2412MHz to 2462MHz IEEE 802.11n(HT40): 2422MHz to 2452MHz 5G WIFI: U-NII-3:5745-5825MHz
Modulation Type:	BLE: GFSK, BT: GFSK, $\pi/4$ DQPSK, 8DPSK 2.4G WIFI: IEEE for 802.11b: DSSS(CCK,DQPSK,DBPSK) IEEE for 802.11g :OFDM(64QAM, 16QAM, QPSK, BPSK) IEEE for 802.11n(HT20 and HT40) : OFDM (64QAM, 16QAM,QPSK,BPSK) 5G WIFI: IEEE 802.11a: OFDM (BPSK, QPSK, 16QAM, 64QAM) IEEE 802.11n(HT20/HT40): OFDM (BPSK, QPSK, 16QAM, 64QAM)
Test Power Grade:	Default
Test Software of EUT:	RF test
Antenna Type:	internal antenna
Antenna Gain:	-1.2dBi
Power Supply:	DC 12.0V
Sample Received Date:	Sep. 15, 2022
Sample tested Date:	Sep. 15, 2022 to Sep. 22, 2022
Remark: Company Name and Address shown on Report, the sample(s) and sample Information was/ were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified.	

4.4 Test Location

All tests were performed at:

Centre Testing International Group Co., Ltd

Building C, Hongwei Industrial Park Block 70, Bao'an District, Shenzhen, China

Telephone: +86 (0) 755 33683668 Fax: +86 (0) 755 33683385

No tests were sub-contracted.

FCC Designation No.: CN1164

4.5 Deviation from Standards

None.

4.6 Abnormalities from Standard Conditions

None.

4.7 Other Information Requested by the Customer

None.

5 SAR Evaluation

5.1 RF Exposure Compliance Requirement

5.1.1 Limits

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 P_{th} (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). P_{th} is given by Formula

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

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).

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

The 1 mW Blanket Exemption of § 1.1307(b)(3)(i)(A) applies for single fixed, mobile, and portable RF sources with available maximum time-averaged power of no more than 1 mW, regardless of separation distance.

5.1.2 Test Procedure

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

5.1.3 EUT RF Exposure Evaluation

①For BLE:

Frequency (MHz)	Max. Conducted Output power (dBm)	Tune up tolerance (dBm)	Max. tune up power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	ERP (dBm)	ERP (mW)	Evaluation distance (cm)	Limit (mW)	Result
2402	-2.41	-2.00±1	-1.00	-1.2	-2.20	-4.35	0.367	20	≤3060	PASS

②For BT:

Frequency (MHz)	Max. Conducted Output power (dBm)	Tune up tolerance (dBm)	Max. tune up power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	ERP (dBm)	ERP (mW)	Evaluation distance (cm)	Limit (mW)	Result
2402	4.48	4.00±1	5.00	-1.2	3.80	1.65	1.462	20	≤3060	PASS

③For 2.4GHz Wi-Fi:

Frequency (MHz)	Max. Conducted Output power (dBm)	Tune up tolerance (dBm)	Max. tune up power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	ERP (dBm)	ERP (mW)	Evaluation distance (cm)	Limit (mW)	Result
2437	14.90	14.00±1	15.00	-1.2	13.80	11.65	14.622	20	≤3060	PASS

④For 5GHz Wi-Fi:

Frequency (MHz)	Max. Condu cted Output power (dBm)	Tune up tolerance (dBm)	Max.tu ne up power(dBm)	Antenna Gain (dBi)	EIRP (dBm)	ERP (dBm)	ERP (mW)	Evaluation distance (cm)	Limit (mW)	Result
5785	12.89	12.00±1	13.00	-1.2	11.80	9.65	9.226	20	≤3060	PASS

Note:

- 1.EIRP=conducted power+antenna gain;
- 2.ERP=EIRP-2.15;
- 3.Only the worst case was recorded in the report.

The test report is effective only with both signature and specialized stamp, The result(s) shown in this report refer only to the sample(s) tested. Without written approval of CTI, this report can't be reproduced except in full.

*** End of Report ***