

TEST REPORT

Product Name : X2 Dongle
Model Number : SVP-D2L1B
FCC ID : 2A4GC-D2L1B

Prepared for : Shiftall Inc.
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1. TEST RESULT CERTIFICATION

Applicant : Shiftall Inc.
Address : 4F TokyoDaiwa Bldg., 2-6-10 Nihonbashibakurocho, Chuo, Tokyo 103-0002, Japan
Manufacturer : Shiftall Inc.
Address : 4F TokyoDaiwa Bldg., 2-6-10 Nihonbashibakurocho, Chuo, Tokyo 103-0002, Japan
Factory : SHENZHEN PCBA-TECH CO.,LTD.
Address : 2211-B315,Xincheng Plaza Bldg.,Xixiang,Baoan,Shenzhen,Guangdong,China
EUT : X2 Dongle
Model Name : SVP-D2L1B
Trademark : X2 Dongle

Measurement Procedure Used:

APPLICABLE STANDARDS	
STANDARD	TEST RESULT
§ 15.247(i), § 2.1093	PASS

The above equipment was tested by EMTEK(DONGGUAN) CO., LTD. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.10 (2013) and the energy emitted by the sample EUT tested as described in this report is in compliance with the requirements of FCC Rules FCC § 15.247(i), § 2.1093.

The test results of this report relate only to the tested sample identified in this report

Date of Test : Nov 18, 2024 to Dec 05, 2024

Prepared by : Warren Deng

Warren Deng /Editor

Reviewer : Tim Dong

Tim Dong /Supervisor

Approve & Authorized Signer : Sam Lv / Manager



Modified History

Version	Report No.	Revision Date	Summary
	EDG2410310054E00402R	/	Original Report



2. EUT Specification

Characteristics	Description
Product:	X2 Dongle
Model Number:	SVP-D2L1B
Sample:	1#
Data Rate:	1Mbps for GFSK modulation
Modulation:	GFSK
Operating Frequency Range(s) :	2402-2480MHz for 1Mbps;
Number of Channels:	79 channels for 2.4G
Transmit Power Max:	1.69 dBm(0.001476 W)
Antenna Gain:	3.0 dBi
Power supply:	DC 5V from USB
Evaluation applied:	☐ MPE Evaluation ☒ SAR Evaluation

3. Test Requirement

SAR Evaluation

According to 447498 D01 V06, systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at *test separation distances* ≤ 50 mm are determined by:

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot$

$[\sqrt{f_{(\text{GHz})}}] \leq 3.0$ for 1-g SAR and ≤ 7.5 for 10-g extremity SAR,²⁴ where

- $f_{(\text{GHz})}$ is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation²⁵
- The result is rounded to one decimal place for comparison
- 3.0 and 7.5 are referred to as the numeric thresholds in the step 2 below

The test exclusions are applicable only when the minimum *test separation distance* is ≤ 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum *test separation distance* is < 5 mm, a distance of 5 mm according to 5) in section 4.1 is applied to determine SAR test exclusion.

Routine SAR evaluation refers to that specifically required by § 2.1093, using measurements or computer simulation. When routine SAR evaluation is not required, portable transmitters with output power greater than the applicable low threshold require SAR evaluation to qualify for TCB approval. One antenna is available for the EUT. The minimum separation distance is 5mm.

4. Measurement Result

Antenna gain: 3.0 dBi
Directional gain: 6.01 dBi

Antenna working condition	Antenna	Transmit Frequency(MHz)	Mode	Measured Power (dBm)	E.I.R.P(dBm)	Tune up Power (dBm)	Max tune up power(dBm)	Calculation Result	1-g SAR
SISO	Ant1	2402	GFSK	0.65	3.65	3±1	4	0.7786038	3
	Ant2	2402	GFSK	-10.64	-7.64	-8±1	-7	0.0623468	3
	Ant1	2440	GFSK	0.57	3.57	3±1	4	0.7911445	3
	Ant2	2440	GFSK	-9.44	-6.44	-7±1	-6	0.0778604	3
	Ant1	2480	GFSK	0.37	3.37	3±1	4	0.7848992	3
	Ant2	2480	GFSK	-4.17	-1.17	-2±1	-1	0.2501819	3

Antenna working condition	Antenna	Transmit Frequency(MHz)	Mode	Measured Power (dBm)	E.I.R.P(dBm)	Tune up Power (dBm)	Max tune up power(dBm)	Calculation Result	1-g SAR
MIMO	Ant1	2402	GFSK	0.54	6.55	6±1	7	1.5535187	3
	Ant2	2402	GFSK	-10.51	-4.50	-5	-4	0.1243981	3
	total	2402	GFSK	0.87	6.88	6±1	7	1.5785409	3
	Ant1	2440	GFSK	0.49	6.50	6±1	7	1.5535187	3
	Ant2	2440	GFSK	-9.52	-3.51	-4±1	-3	0.1566080	3
	total	2440	GFSK	0.90	6.91	6±1	7	1.5785409	3
	Ant1	2480	GFSK	0.32	6.33	6±1	7	1.5535187	3
	Ant2	2480	GFSK	-4.00	2.01	2±1	3	0.6234676	3
	total	2480	GFSK	1.69	7.70	7±1	8	1.9872652	3

According to KDB 447498 D01 V06, no stand-alone required for BT antenna, and no simultaneous SAR measurement is required.

*** End of Report ***