FCC RF EXPOSURE REPORT

FCC ID: RWO-RZ010299

Project No.	:	2002C032B
Equipment	:	Wireless Trackball Mouse
Brand Name	:	SANWA
Test Model	:	GMATB155
Series Model	:	N/A
Applicant	:	Sanwa Supply Inc.
Address	:	1-10-1,Tamachi,Kita-ku,Okayama-shi,Okayama,700-0825,Japan
Manufacturer	:	iOne Electronic Technology co., LTD. Taiwan Branch
Address	:	Rm. 2, 8F., No. 75, Sec. 1, Xintai 5th Rd., Xizhi Dist., New Taipei city, Taiwan
Factory	:	Dong Guan Ione Electronic Co.,Ltd.
Address	:	Yong Jun 2rd Rd, Jin Qian Ling Ind. District, Jitigang, Huang Jiang Town, Dong Guan, Guang Dong Province, China (Post Code:523715)
Date of Receipt	:	Mar. 24, 2020
Date of Test	:	Mar. 25, 2020 ~ Mar. 28, 2020
Issued Date	:	Apr. 13, 2020
Report Version	:	R00
Test Sample	:	Engineering Sample No.: DG2020022044
Standard(s)	:	FCC Guidelines for Human Exposure IEEE C95.1 & KDB447498 D01

The above equipment has been tested and found compliance with the requirement of the relative standards by BTL Inc.

Nick Chen

Prepared by : Nick Chen

Ethan Ma

Approved by : Ethan Ma

Certificate #5123.02

Add: No.3, Jinshagang 1st Road, Shixia, Dalang Town,Dongguan, Guangdong, China.
Tel: +86-769-8318-3000
Web: www.newbtl.com

REPORT ISSUED HISTORY

Report Version	Description	Issued Date
R00	Original Issue.	Apr. 13, 2020

1. GENERAL INFORMATION

1.1 GENERAL DESCRIPTION OF EUT

Equipment	Wireless Trackball Mouse	
Brand Name	SANWA	
Test Model	GMATB155	
Series Model	N/A	
Model Difference(s)	N/A	
Power Source	Battery supplied.	
Power R ting	DC 1.5V	
Product Description for LE	Operation Frequency	2402 MHz ~ 2480 MHz
	Modulation Technology	GFSK
	Bit Rate of Transmitter	1Mbps, 2Mbps
	Max. Output Power	-9.01 dBm (0.000126 W) For 1Mbps -5.14 dBm (0.000306 W) For 2Mbps
Product Description for 2.4G SRD	Operation Frequency	2405MHz ~ 2470MHz
	Modulation Technology	GFSK
	Bit Rate of Transmitter	2 Mbps
	Max. Output Power	-7.47 dBm (0.000179W)

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.

2. Channel List:

For LE:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
00	2402	20	2442
01	2404	21	2444
02	2406	22	2446
03	2408	23	2448
04	2410	24	2450
05	2412	25	2452
06	2414	26	2454
07	2416	27	2456
08	2418	28	2458
09	2420	29	2460
10	2422	30	2462
11	2424	31	2464
12	2426	32	2466
13	2428	33	2468
14	2430	34	2470
15	2432	35	2472
16	2434	36	2474
17	2436	37	2476
18	2438	38	2478
19	2440	39	2480

For 2.4G SRD:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
00	2405	01	2412
02	2422	03	2430
04	2440	05	2450
06	2460	07	2470

3. Table for Filed Antenna:

For LE/2.4G:

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1		LYNX-W11BT	Internal	N/A	0.71

2. GENERAL CONCULUSION

According to FCC KDB447498 D01, Appendix A, SAR Test Exclusion Thresholds for 100 MHz – 6 GHz and ≤ 50 mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following:

[(max. power of channel, including tune-up tolerance, mW) / (min. test separation distance, mm)] · [√f(GHz)] ≤ 3.0 for 1-g SAR, and ≤ 7.5 for 10-g extremity SAR, where

- f(GHz) is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation
- The result is rounded to one decimal place for comparison

Appendix A - SAR Test Exclusion Thresholds for 100 MHz - 6 GHz and ≤ 50 mm

MHz	5	10	15	20	25	30	35	40	45	50	mm
150	39	77	116	155	194	232	271	310	349	387	SAR Test Exclusion Thresholds (mW)
300	27	55	82	110	137	164	192	219	246	274	
450	22	45	67	89	112	134	157	179	201	224	
835	16	33	49	66	82	98	115	131	148	164	
900	16	32	47	63	79	95	111	126	142	158	
1500	12	24	37	49	61	73	86	98	110	122	
1900	11	22	33	44	54	65	76	87	98	109	
2450	10	19	29	38	48	57	67	77	86	96	
3600	8	16	24	32	40	47	55	63	71	79	
5200	7	13	20	26	33	39	46	53	59	66	
5400	6	13	19	26	32	39	45	52	58	65	
5800	6	12	19	25	31	37	44	50	56	62	

3. TEST RESULTS

For LE:

Max. Output Power (dBm)	Max. Output Power (mW)	Limit (mW)
-5.14	0.3062	10

For 2.4G SRD:

Max. Output Power (dBm)	Max. Output Power (mW)	Limit (mW)
-7.47	0.1791	10

Note:

(1) The maximum measured output peak power of this EUT is 0.3062mW, less than 10mW at 5mm distance. Conclusion: No SAR evaluation required since transmitter power is below FCC threshold.

End of Test Report