SAR Exclusion Evaluation Report

Applicant	:	Askey Computer Corp.
Product Type	:	Dynalink Wireless Gamepad
Trade Name	:	Dynalink
Model Number	:	DL-GAW36
Date of Received	:	Jul. 16, 2021
Test Period	:	Jul. 23 ~ Aug. 05, 2021
Date of Issued	:	Aug. 10, 2021

Issue by

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ACCREDITED
Certificate #3464.02

American Association for Laboratory Accreditation number: 3464.02
Test Firm MRA designation number: CN1168

Revision History

Rev.	Issue Date	Revisions
00	Aug. 10, 2021	Initial Issue

Contents

1. Description of Equipment under Test (EUT)

Applicant	Askey Computer Corp. 10F, No.119, Jiankang Rd., Zhonghe Dist., New Taipei City 23585, Taiwan		
Manufacturer	Askey Computer Corp. 10F, No.119, Jiankang Rd., Zhonghe Dist., New Taipei City 23585, Taiwan		
Product Type	Dynalink Wireless Gamepad		
Trade Name	Dynalink		
Model Number	DL-GAW36		
FCC ID	H8N-DL-GAW36		
Frequency Range	Operate Band		Frequency Range (MHz)
	Bluetooth BR		2402 - 2480
	Bluetooth EDR		2402 - 2480
Antenna information	Type	Max. Gain (dBi)	
	Printed Antenna	2402-2480	0.00263

The above equipment was tested by A Test Lab Techno Corp. For compliance with the requirements set forth in 47 CFR § 2.1093. The results of testing in this report apply only to the product/system, which was tested. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

2. Reference Applicable Standard

Standard	Description	Version
ANSI/IEEE C95.1	American National Standard safety levels with respect to human exposure to radio frequency electromagnetic fields, 300 kHz to 100 GHz, New York.	1992
IEEE 1528	IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head From Wireless Communications Devices: Measurement Techniques.	2013
FCC 47 CFR Part 2.1093	Radiofrequency radiation exposure evaluation: portable devices.	---
FCC KDB 865664 D01	SAR measurement 100 MHz to 6 GHz - describes SAR measurement procedures for devices operating between 100 MHz to 6 GHz	v01r04
FCC KDB 865664 D02	RF Exposure Reporting - provides general reporting requirements as well as certain specific information required to support MPE and SAR compliance.	v01r02
FCC KDB 447498 D01	General RF Exposure Guidance - provides guidance pertaining to RF exposure requirements for mobile and portable device equipment authorizations.	v06

3. SAR Test Exclusion

As RF exposure evaluation of portable device, SAR test is not required when the evaluation results. According to KDB 447498 4.3.1, unless excluded by specific FCC test procedures, portable devices shall include SAR data for equipment approval. SAR test necessity will be based on the exclusion result.

The test exclusion refers KDB 447498 as below:

≤50 mm:

[(*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

>50 mm and <200 mm:

a) [Power allowed at numeric threshold for 50 mm in step 1) + (test separation distance - 50 mm)·(f(MHz)/150)] mW, at 100 MHz to 1500 MHz

b) [Power allowed at numeric threshold for 50 mm in step 1) + (test separation distance - 50 mm)·10] mW at > 1500 MHz and ≤ 6 GHz

3.1 Conducted Power

The conducted power turn-up tolerance, please reference manufacturer specification.

Band	Modulation Type	Data Rate (Mbps)	Frequency (MHz)	Packet Type	Average Power (dBm)
Bluetooth BR	GFSK	1	2402.0	DH1	-14.65
				DH3	-14.85
				DH5	-14.50
			2441.0	DH1	-15.42
				DH3	-14.79
				DH5	-15.11
			2480.0	DH1	-15.58
				DH3	-16.59
				DH5	-16.42
Bluetooth EDR	π/4-DQPSK	2	2402.0	2DH1	-15.85
				2DH3	-16.52
				2DH5	-16.75
			2441.0	2DH1	-16.59
				2DH3	-17.24
				2DH5	-17.54
			2480.0	2DH1	-17.22
				2DH3	-18.09
				2DH5	-17.87
	8DPSK	3	2402.0	3DH1	-15.84
				3DH3	-16.06
				3DH5	-16.18
			2441.0	3DH1	-16.96
				3DH3	-17.23
				3DH5	-16.89
			2480.0	3DH1	-17.83
				3DH3	-18.09
				3DH5	-17.96

3.2 Antenna Location

Ant. Used	Antenna to user distance (mm)					
	Side 1	Side 2	Side 3	Side 4	Side 5	Side 6
Bluetooth Antenna	5	5	5	5	5	5

3.3 Evaluation Results

The evaluation of SAR test reduction according to KDB447498

SAR test is not required when the results showed “EXEMPT”.

SAR test reduction										
Ant. Used	Band	Frequency (GHz)	Power		Calculated threshold value					
			(dBm)	(mW)	Side 1	Side 2	Side 3	Side 4	Side 5	Side 6
Bluetooth Antenna	BT	2.402	-14.50	0. 035	0.0168	0.0168	0.0168	0.0168	0.0168	0.0168
					EXEMPT	EXEMPT	EXEMPT	EXEMPT	EXEMPT	EXEMPT
		2.441	-14.79	0.033	0.0161	0.0161	0.0161	0.0161	0.0161	0.0161
					EXEMPT	EXEMPT	EXEMPT	EXEMPT	EXEMPT	EXEMPT
		2.480	-15.58	0.028	0.0139	0.0139	0.0139	0.0139	0.0139	0.0139
					EXEMPT	EXEMPT	EXEMPT	EXEMPT	EXEMPT	EXEMPT

Exclusion Considerations: SAR is not required

Note:
1. Calculated Value include string "mW", that is mean through compare output power with threshold, if the output power more than threshold value the SAR test should be perform. Otherwise, the SAR test could be exempt. (>50mm)
2. Calculated Value only include number format, that is mean through compare output power with threshold, if the threshold value more than 3, the SAR test should be perform. Otherwise, the SAR test could be exempt. (<50mm)
3. When an antenna qualifies for the standalone SAR test exclusion of KDB447498 section 4.3.1 and also transmits simultaneously with other antennas, the standalone SAR value must be estimated according to KDB447498 section "4.3.2. Simultaneous transmission SAR test exclusion considerations b) ".
4. We used highest frequency and power, the result should be evaluated the worst case.
5. Power and distance are rounded to the nearest mW and mm before calculation.
6. The result is rounded to once decimal place for comparison.
7. We use a minimum distance of 5mm for Bluetooth function.