TEST REPORT

Product Name : Laser engraving machine
Model Number : K6
FCC ID : 2A79Y-K6

Prepared for	:	Dongguan Xinjia Laser Technology Co.,Ltd.
Address	:	Room 602, No.419, Jinxing Road, Liaobu Town, Dongguan City, Guangdong Province
Prepared by	:	EMTEK (DONGGUAN) CO., LTD.
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Report Number	:	EDG2410310439E00203R
Date(s) of Tests	:	Oct 31, 2024 to Dec 25, 2024
Date of issue	:	Dec 25, 2024

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1. TEST RESULT CERTIFICATION

Applicant	:	Dongguan Xinjia Laser Technology Co.,Ltd.
Address	:	Room 602, No.419, Jinxing Road, Liaobu Town, Dongguan City, Guangdong Province
Manufacturer	:	Dongguan Xinjia Laser Technology Co.,Ltd.
Address	:	Room 602, No.419, Jinxing Road, Liaobu Town, Dongguan City, Guangdong Province
Factory	:	Dongguan Xinjia Laser Technology Co.,Ltd.
Address	:	Room 602, No.419, Jinxing Road, Liaobu Town, Dongguan City, Guangdong Province
EUT	:	Laser engraving machine
Model Name	:	K6
Trademark	:	WAINLUX

Measurement Procedure Used:

APPLICABLE STANDARDS	
STANDARD	**TEST RESULT**
§ 15.247(i), § 2.1091, 1.1307(b)(1)	**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), § 2.1091 , 1.1307(b)(1).

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

Date of Test : Oct 31, 2024 to Dec 25, 2024

Prepared by : Jessica Zhang /Editor

Reviewer : Warren Deng /Supervisor

Approve & Authorized Signer : Sam Lv /Manager

Modified History

Version	Report No.	Revision Date	Summary
	EDG2410310439E00203R	/	Original Report

2. EUT Specification

Characteristics	Description
Product:	Laser engraving machine
Model Number:	K6
Sample:	1#
Data Rate:	1Mbps for GFSK modulation 2Mbps for π/4-DQPSK modulation 3Mbps for 8DPSK modulation 1Mbps for GFSK modulation 2Mbps for GFSK modulation
Modulation:	GFSK, π/4-DQPSK, 8DPSK
Operating Frequency Range(s) :	2402-2480MHz
Number of Channels:	BT: 79 channels BLE:40 channels
Transmit Power Max:	BT:0.88 dBm(0.001225 W) BLE:0.09 dBm(0.001021 W)
Antenna Gain:	2 dBi
Power supply:	DC 12V 2A from Adapter
Evaluation applied:	☒ MPE Evaluation ☐ SAR Evaluation

3. Test Requirement

RF EXPOSURE EVALUATION

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency(RF) Radiation as specified in §1.1307(b)

Limits for Maximum Permissible Exposure (MPE)

Frequency Range(MHz)	Electric Field Strength(V/m)	Magnetic Field Strength(A/m)	Power Density(mW/cm^2)	Average Time
(A) Limits for Occupational/Control Exposures				
300-1500	--	--	F/300	6
1500-100000	--	--	5	6
(B) Limits for General Population/Uncontrol Exposures				
300-1500	--	--	F/1500	6
1500-100000	--	--	1	30

Friis transmission formula: Pd= (Pout*G)\ ($4*pi*R^2$)

Where

Pd= Power density in mW/cm^2

Pout=output power to antenna in mW

G= Numeric gain of the antenna relative to isotropic antenna

Pi=3.1416

R= distance between observation point and center of the radiator in cm

Pd the limit of MPE, $1mW/cm^2$. If we know the maximum gain of the nd total power input to the antenna, through the calculation, we will know the distance where the MPE limit is reached.

4. Measurement Result

Antenna gain: 2 dBi

gain:	2	BT FCC EMF							
Mode	Frequency (MHz)	Output Power (dBm)	E.I.R.P(dBm)	Target Power W/tolerance (dBm)	Max tune up power(dBm) tolerance	Max tuneup power(mW) tolerance	Power Density at R=20cm (mW/cm2)	Limit (mW/cm2)	Verdict
GFSK	2402	-0.34	1.66	1±1	2	1.58	0.000500	1	PASS
	2441	0.02	2.02	2±1	3	2.00	0.000629	1	PASS
	2480	-1.32	0.68	0±1	1	1.26	0.000397	1	PASS
pi/4-DQPSK	2402	0.33	2.33	2±1	3	2.00	0.000629	1	PASS
	2441	0.58	2.58	2±1	3	2.00	0.000629	1	PASS
	2480	-0.72	1.28	1±1	2	1.58	0.000500	1	PASS
8-DPSK	2402	0.72	2.72	2±1	3	2.00	0.000629	1	PASS
	2441	0.88	2.88	2±1	3	2.00	0.000629	1	PASS
	2480	-0.52	1.48	1±1	2	1.58	0.000500	1	PASS

gain:	2	BLE FCC EMF							
Mode	Frequency (MHz)	Output Power (dBm)	E.I.R.P(dBm)	Target Power W/tolerance (dBm)	Max tune up power(dBm) tolerance	Max tuneup power(mW) tolerance	Power Density at R=20cm (mW/cm2)	Limit (mW/cm2)	Verdict
GFSK	2402	-0.39	1.61	1±1	2	1.58	0.000500	1	PASS
	2441	0.04	2.04	2±1	3	2.00	0.000629	1	PASS
	2480	-1.39	0.61	0±1	1	1.26	0.000397	1	PASS
pi/4-DQPSK	2402	-0.4	1.6	1±1	2	1.58	0.000500	1	PASS
	2441	0.09	2.09	2±1	3	2.00	0.000629	1	PASS
	2480	-1.29	0.71	0±1	1	1.26	0.000397	1	PASS

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

*** End of Report ***