



Spectrum Research & Testing Lab., Inc.

No.167, Ln. 780, Shan-Tong Rd., Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

TEST REPORT

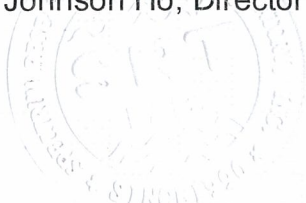
Reference No.: A15112310
Report No.: MPE15112310
FCC ID : 2AGZKBTRON5000
Page:1 of 7
Date: Mar. 30, 2016

Product Name: Blutronium
Model No.: B-TRON 5000
Applicant: U.S. Converters LLC
1321 Upland Dr., Suite 5462 Houston, TX 77043, USA
Date of Receipt: Nov. 23, 2015
Finished date of Test: Mar. 30, 2016
Applicable Standards: KDB 447498
KDB 865664

We, **Spectrum Research & Testing Laboratory Inc.**, hereby certify that one sample of the above was tested in our laboratory with positive results according to the above-mentioned standards. The records in the report are an accurate account of the results. Details of the results are given in the subsequent pages of this report.

Tested By : Leo Yang , Date: 2016/3/30
(Leo Yang)

Approved By : Johnson Ho , Date: 3/30/2016
(Johnson Ho, Director)





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1. DOCUMENT POLICY AND TEST STATEMENT

1.1 DOCUMENT POLICY

- The report shall not be reproduced except in full, without the written approval of SRT Lab, Inc.

1.2 TEST STATEMENT

- The test results in the report apply only to the unit tested by SRT Lab.
- There was no deviation from the requirements of test standards during the test.
- DC power source, 3.3Vdc of Li-ion battery
- AC 120V/60Hz for PC was used during the test.

1.3 EUT MODIFICATION

- No modification in SRT Lab.

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2. DESCRIPTION OF EUT AND TEST MODE

2.1 GENERAL DESCRIPTION OF EUT

PRODUCT	Blutronium
MODEL NO.	B-TRON 5000
POWER SUPPLY	DC power source from Li-ion battery : DC 3.3V,200mA AC power source of PC for USB port : AC 120V/60Hz
FREQUENCY BAND	2.400GHz ~ 2.4835GHz
CARRIER FREQUENCY	2.402GHz ~ 2.480GHz
NUMBER OF CHANNEL	79
RATED RF OUTPUT POWER	13.22 dBm (0.021W)@2441 MHz
MODULATION TYPE	$\pi/4$ DQPSK, 8DPSK
MODE of OPERATION	Duplex
ANTENNA TYPE	Chip Antenna
ANTENNA GAIN	2 dBi
OPERATING TEMPERATURE RANGE	-10 ~ 70°C

NOTE: For more detailed information, please refer to the EUT's specification or user's manual provided by manufacturer.

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3. RF POWER EXPOSURE EVALUATION TEST**3.1 LIMIT**

According to the requirements of Part 1.1310(e), KDB 447498 D01 General RF Exposure Guidance v06, Section7, and KDB 865664 D02 RF Exposure Reporting v01r02, section 2 .

Limits for Occupational/Controlled Exposure

Frequency Range (MHz)	Electric Field Strength(E) (V/m)	Magnetic Field Strength(H) (A/m)	Power density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	(900/f ²)*	6
30-300	61.4	0.163	1.0	6
300-1500	--	--	f/300	6
1500-100,000	--	--	5	6

Limits for General Population/Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength(E) (V/m)	Magnetic Field Strength(H) (A/m)	Power density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f ²)*	30
30-300	27.5	0.073	0.2	30
300-1500	--	--	f/1500	30
1500-100,000	--	--	1.0	30

f = frequency in MHz *Plane-wave equivalent power density

NOTE 1: Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

NOTE 2: General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.



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3.2 TEST PROCEDURE

1. The EUT was operating in Tx mode.
2. The EUT uses an Chip antenna, the antenna gain of 2 dBi is declared by the manufacturer.

$$S = (30 * P * G) / (377d^2)$$

Where:

S: Power Density (mW/cm²);

P: Transmitter power (mW);

G: Numeric Ant Gain;

d: Distance (20 cm);

3.3 EUT OPERATING CONDITION

1. Setup the EUT and all peripheral devices .
2. Turn on the power of all equipment and EUT.
3. Set the EUT under continuous transmission condition mode.
4. The EUT was set to the highest available power level.

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3.4 CONNECT POWER AT THE ANTENNA CONNECTOR RESULT

Temperature:	16 °C	Humidity:	66% RH
Spectrum Detector:	PK.	Tested Mode:	Tx
Tested By:	Leo Yang	Tested Date:	Mar. 30, 2016

CHANNEL NUMBER	CHANNEL FREQUENCY (MHz)	MPE DISTANCE (cm)	ANTENNA GAIN (dBi)	PEAK POWER OUTPUT		CALCULATED RF EXPOSURE (mW/cm ²)	LIMIT (mW/cm ²)
				dBm	mW		
39	2441	20	2	13.22	21	0.0066	1

NOTE: Limits for Occupational/Controlled Exposure