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RF Exposure Report

Application No.:	FYCR2205000201ME
Applicant:	Guangdong Transtek Medical Electronics Co., Ltd
Address of Applicant:	Zone A, No.105, Dongli Road, Torch Development District, Zhongshan, 528437, Guangdong, China
Manufacturer:	Guangdong Transtek Medical Electronics Co., Ltd
Address of Manufacturer:	Zone A, No.105, Dongli Road, Torch Development District, Zhongshan, 528437, Guangdong, China
Factory:	Guangdong Transtek Medical Electronics Co., Ltd
Address of Factory:	Zone A, No.105, Dongli Road, Torch Development District, Zhongshan, 528437, Guangdong, China
Equipment Under Test (EUT):	
EUT Name:	Blood pressure monitor
Model No.:	LS802-GP
FCC ID:	OU9LS802GPM3
Standard(s) :	47 CFR Part 2.1091 47 CFR Part 1.1310 47 CFR Part 1.1307
Date of Receipt:	2022-05-30
Date of Test:	2022-06-01 to 2022-06-16
Date of Issue:	2022-06-20
Test Result:	**Pass***

* In the configuration tested, the EUT complied with the standards specified above.

Winkey Wang

EMC Technical Manager

Revision Record				
Version	**Chapter**	**Date**	**Modifier**	**Remark**
01		2022-06-20		Original

Authorized for issue by:				
		Tree Zhan **Tree Zhan/Project Engineer**		
		Winkey Wang **Winkey Wang/Reviewer**		

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3 General Information

3.1 Details of E.U.T.

Power supply:	AC Adapter Model: BLJ06L060100P-U Input: AC 100-240V, 50/60Hz, 0.2A Max Output: DC 6.0V, 1000mA DC 6V (4*AA batteries)
Test voltage:	AC 120V, 60Hz Note: Both nominal AC 120V, 60Hz and AC 240 V, 60Hz are required for testing in accordance with FCC KDB174176, this report only shows the results of the worst test result(AC 120V, 60Hz);
Cable(s):	DC cable:146cm unshielded
Sample Type:	Fixed production
CatM Band	
Operation Frequency Band:	CatM1 Band 2, 4, 12, 13, 25
Modulation Type:	QPSK, 16QAM
Antenna Type:	PIFA Antenna
Antenna Gain:	CatM1 Band 2: 2.96dBi, CatM1 Band 4: 3.44dBi, CatM1 Band 12: 1.09dBi, CatM1 Band 13: 1.72dBi, CatM1 Band 25: 2.96dBi
GSM Band	
Support Network:	GPRS, EGPRS
Operation Frequency Band:	GSM850/GSM1900
Modulation Type:	GMSK for GSM/GPRS/EGPRS 8PSK for EGPRS
Supported Channel Bandwidth:	200KHz
Antenna Type:	PIFA Antenna
Antenna Gain:	GSM850: -0.58dBi GSM1900: 2.96dBi

3.2 Test Location

All tests were performed at:

Compliance Certification Services（Kunshan）Inc. Shenzhen branch.

Fuyong lab. Xinlong TechnoPark,Fengtang Road, Fuyong Subdistrict, Bao'an, Shenzhen, China

Tel: +86 755 8866 3988 Fax: +86 755 2671 0594

No tests were sub-contracted.

3.3 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

• A2LA (Certificate No. 6606.01)

Compliance Certification Services（Kunshan）Inc. Shenzhen branch is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 6606.01.

• FCC –Designation Number: CN1322

Compliance Certification Services（Kunshan）Inc. Shenzhen branch has been recognized as an accredited testing laboratory.

Designation Number: CN1322. Test Firm Registration Number: 718073

• Innovation, Science and Economic Development Canada

Compliance Certification Services（Kunshan）Inc. Shenzhen branch has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0129.

IC#: 28189.

4 Radio Spectrum Technical Requirement

4.1.1 RF Exposure

4.1.2 Requirement

In accordance with 47 CFR FCC Part 2.1091, this device has been defined as a mobile device whereby a distance of 0.2m normally can be maintained between the user and the device.

According to 47 CFR FCC Part 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 Part1.1307(b).

TABLE 1 TO §1.1310(E)(1)—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm^2)	Averaging time (minutes)
(i) Limits for Occupational/Controlled Exposure				
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
300-1,500			f/300	<6
1,500-100,000			5	<6
(ii) Limits for General Population/Uncontrolled Exposure				
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
300-1,500			f/1500	<30
1,500-100,000			1.0	<30
f = frequency in MHz. * = Plane-wave equivalent power density				

4.1.3 Method

According to IEEE C95.3:2002 section 5.5.1.1, the power density S at a point on the axis at a distance d from a transmitting antenna is given by the Friis free-space transmission formula:

$$S = \frac{PG}{4\pi d^2}$$

S = power density (mW/cm²)
P = the net power delivered to the antenna (mW)
G = gain of the antenna in linear scale
d = distance between observation point and center of the radiator (cm)

From the maximum EUT RF output power, as well as the gain of the used antenna, according toe the RF power density limit stated in above table, the mimimum distance between the antenna and human body will be calculated.

4.1.4 Conclusion

Type	Test Freq. (MHz)	Max Antenna Gain (dBi)	Max Antenna Gain (Numeric)	Max tune-up tolerance power (dBm)	Max tune-up Tolerance power to Antenna (mW)	Power Density at R=20cm (mW/cm²)	Limit (mW/cm²)	MPE Ratios	Result
GSM850	824.2	-0.58	0.87	33	1995.26	0.3473	0.5495	0.6321	PASS
PCS1900	1850.2	2.96	1.98	30	1000.00	0.3933	1.0000	0.3933	PASS
CatM Band2	1850.7	2.96	1.98	23	199.53	0.0785	1.0000	0.0785	PASS
CatM Band4	1710.7	3.44	2.21	23.5	223.87	0.0983	1.0000	0.0983	PASS
CatM Band12	699.7	1.09	1.29	23.5	223.87	0.0572	0.4665	0.1227	PASS
CatM Band13	779.5	1.72	1.49	24	251.19	0.0743	0.5197	0.1429	PASS
CatM Band 25	1850.7	2.96	1.98	23.5	223.87	0.0880	1.0000	0.0880	PASS

Note: the GSM band and CatM band cannot synchronous transmission at the same time.

4.2 EUT Constructional Details

Refer to Appendix - external and internal photos for FYCR220500201ME.

--End of the Report--