

1 Cover Page

RF Exposure Report

Application No.: FYCR2205000186ME
Applicant: Guangdong Transtek Medical Electronics Co., Ltd.
Address of Applicant: Zone A, No.105, Dongli Road, Torch Development District, 528437 Zhongshan, Guangdong, China
Manufacturer: Guangdong Transtek Medical Electronics Co., Ltd.
Address of Manufacturer: Zone A, No.105, Dongli Road, Torch Development District, 528437 Zhongshan, Guangdong, China
Factory: Guangdong Transtek Medical Electronics Co., Ltd.
Address of Factory: Zone A, No.105, Dongli Road, Torch Development District, 528437 Zhongshan, Guangdong, China
Equipment Under Test (EUT):
EUT Name: Blood Pressure Monitor
Model No.: TMB-1597-G
FCC ID: OU9TMB-1597-G
Trade mark: Transtek
Standard(s) : 47 CFR Part 2.1091
 47 CFR Part 1.1310
 47 CFR Part 1.1307
Date of Receipt: 2022-05-25
Date of Test: 2022-05-25 to 2022-06-15
Date of Issue: 2022-06-15

Test Result:	Pass*
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* In the configuration tested, the EUT complied with the standards specified above.



EMC Technical Manager



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Revision Record				
Version	Chapter	Date	Modifier	Remark
01		2022-06-15		Original

Authorized for issue by:			
		<i>Tree Zhan</i>	
		Tree Zhan/Project Engineer	
		<i>Winkey Wang</i>	
		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, 1.0A 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 Band2: 1.97dBi, CatM1 Band4: 1.2dBi, CatM1 Band12: -2.37dBi, CatM1 Band13: 0.39dBi, CatM1 Band2: 1.97dBi



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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.



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4 Radio Spectrum Technical Requirement

4.1 RF Exposure

4.1.1 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



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4.1.2 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 to the RF power density limit stated in above table, the minimum distance between the antenna and human body will be calculated.

4.1.3 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/cm ²)	Limit (mW/cm ²)	MPE Ratios	Result
CatM Band2	1850.7	1.97	1.57	23	199.53	0.0625	1.0000	0.0625	PASS
CatM Band4	1710.7	1.2	1.32	23.5	223.87	0.0587	1.0000	0.0587	PASS
CatM Band12	699.7	-2.37	0.58	23.5	223.87	0.0258	0.4665	0.0553	PASS
CatM Band13	779.5	0.39	1.09	24	251.19	0.0547	0.5197	0.1052	PASS
CatM Band 25	1850.7	1.97	1.57	23.5	223.87	0.0701	1.0000	0.0701	PASS

4.2 EUT Constructional Details

Refer to Appendix - external and internal photos for FYCR220500186ME.

--End of the Report--



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