



**ONE PLUS ONE**  
Wireless Communication

深圳市一加一无线通讯技术有限公司

# 承认书

## APPROVAL SHEET

客户 Customer	贝瑞
项目名 Project	BM1000B
料号 Part NO.	
规格 Specification	MAIN Antennas
厂家名称 Manufacturer Name	深圳市一加一无线通讯技术有限公司 Shenzhen OnePlusOne Wireless Communication Technology Co.,Ltd.
厂家地址 Manufacturer Address	深圳市宝安区航城街道航城锦驰产业园 B1 栋 7 楼 7th Floor, Building B1, Hangcheng Jinchi Industrial Park, Hangcheng Street, Bao'an District, Shenzhen
型号 Model	4G blood oximeter

APPROVAL

Project: BM1000B	Author: Haiou.zhu	File Name: BM1000B APP_A.doc
Date: 2023-07-26		
Revision:	A	
<b>CONFIDENTIAL</b> Shenzhen OnePlusOne Wireless Communication Technology Co.,Ltd.		

OnePlusOne:			
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Customer:			
EE Check	PM Check	QC Check	Confirm By

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Date:	Revision:	Updates and changes:	Issued by:
2023-07-26	A	Initial sheet	Xuecheng.li

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# 1 Antenna description

It summarize Main and G/W/B antennas for project **BM1000B**. MAIN antenna's frequency band is 700-800MHz&1710-1990MHZ,

## 1.1 Part number

Part number of antenna: **BM1000B-MAIN**

Antenna pictures



# 2 Electrical Performance

## 2.1 Specificatio

Main		
Frequency Range	700MHz~0MHz	1710MHz~1990MHz
Return Loss	<-4	<-5
Efficiency	>22%	>35%

## 2.2 Measurement Set-up

### 2.2.1 VSWR and Return Loss

VSWR measurements ( $S_{11}$ ) were performed using an Agilent ENA series Network Analyzer and the previously described test fixture. Coaxial chokes were used to mitigate surface currents on the outside of the cabling. The testing was performed in free space.

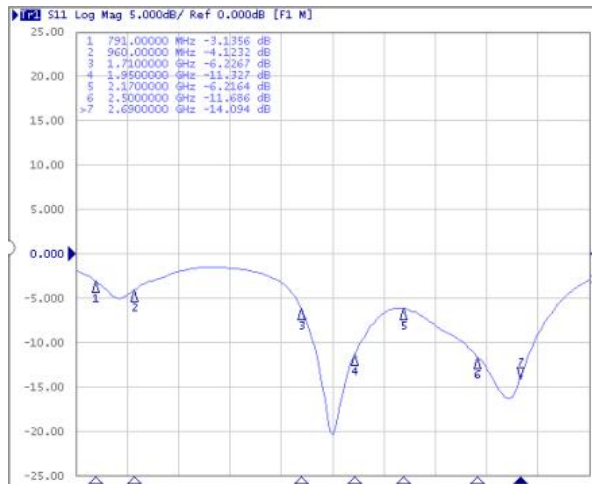
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## 2.2.2 Efficiency and Gain

The gain of the antenna was measured in OPO's 3D anechoic chamber in Shenzhen, China. The chamber is a ETS system capable of doing tests from 380MHz to 6GHz. Coaxial chokes on the feed cable were used to mitigate surface currents during passive tests. The measurement results are calibrated using dipole standards. For TRP and TIS the chamber uses a 8960 / MT8820C to establish the connection with the mobile device and read the power.

## 3 Reference measurement data

### 3.1 Passive



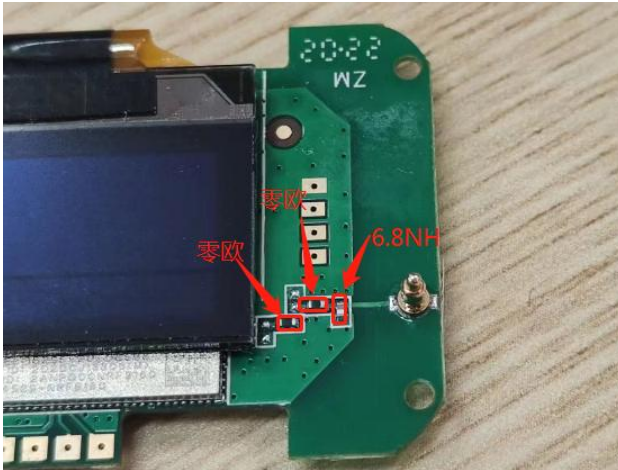
**MAIN Return Loss**

### 3.2 Active

Passive Test For D1				Passive Test For1690-1900			
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
700	21.51	-6.65	-3.91	1690	59.38	-1.59	0.17
710	21.79	-6.62	-3.94	1700	78.52	-1.05	0.96
720	23.33	-6.32	-3.74	1710	63.12	-2	0.28
730	22.05	-6.55	-3.34	1720	75.95	-1.19	1.17
740	23.82	-6.23	-3.51	1730	50.36	-2.98	-0.65
750	29.52	-5.28	-2.51	1740	60.91	-2.15	0.22
760	23.85	-6.22	-3.44	1750	42.71	-3.69	-1.24
770	24.38	-6.13	-3.74	1760	52.67	-2.78	-0.19
780	25.34	-5.95	-3.31	1770	43.35	-3.63	-0.52
790	23.83	-6.23	-3.65	1780	51.08	-2.92	0.23
800	22.51	-6.48	-4.11	1790	34.39	-4.64	-1.1
				1800	43.57	-3.55	0.06
				1810	35.45	-4.5	-0.68
				1820	45.03	-3.45	0.41
				1830	43.44	-3.62	0.32
				1840	51.45	-2.53	0.97
				1850	41.65	-3.3	0.04
				1860	54.51	-2.54	1.12
				1870	50.12	-3	0.65
				1880	61.42	-2.12	1.37
				1890	65.6	-1.64	1.7
				1900	65.14	-1.85	1.45
				1910	67.95	-1.65	1.9
				1920	67.82	-1.69	1.95
				1930	69.17	-1.6	1.97
				1940	55.57	-2.47	0.84
				1950	74.03	-1.31	2.21
				1960	59.32	-2.27	1.24
				1970	70.99	-1.49	2.12
				1980	57.15	-2.43	1.14
				1990	74.31	-1.29	2.25

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### 3.3 Matching Circuit Description

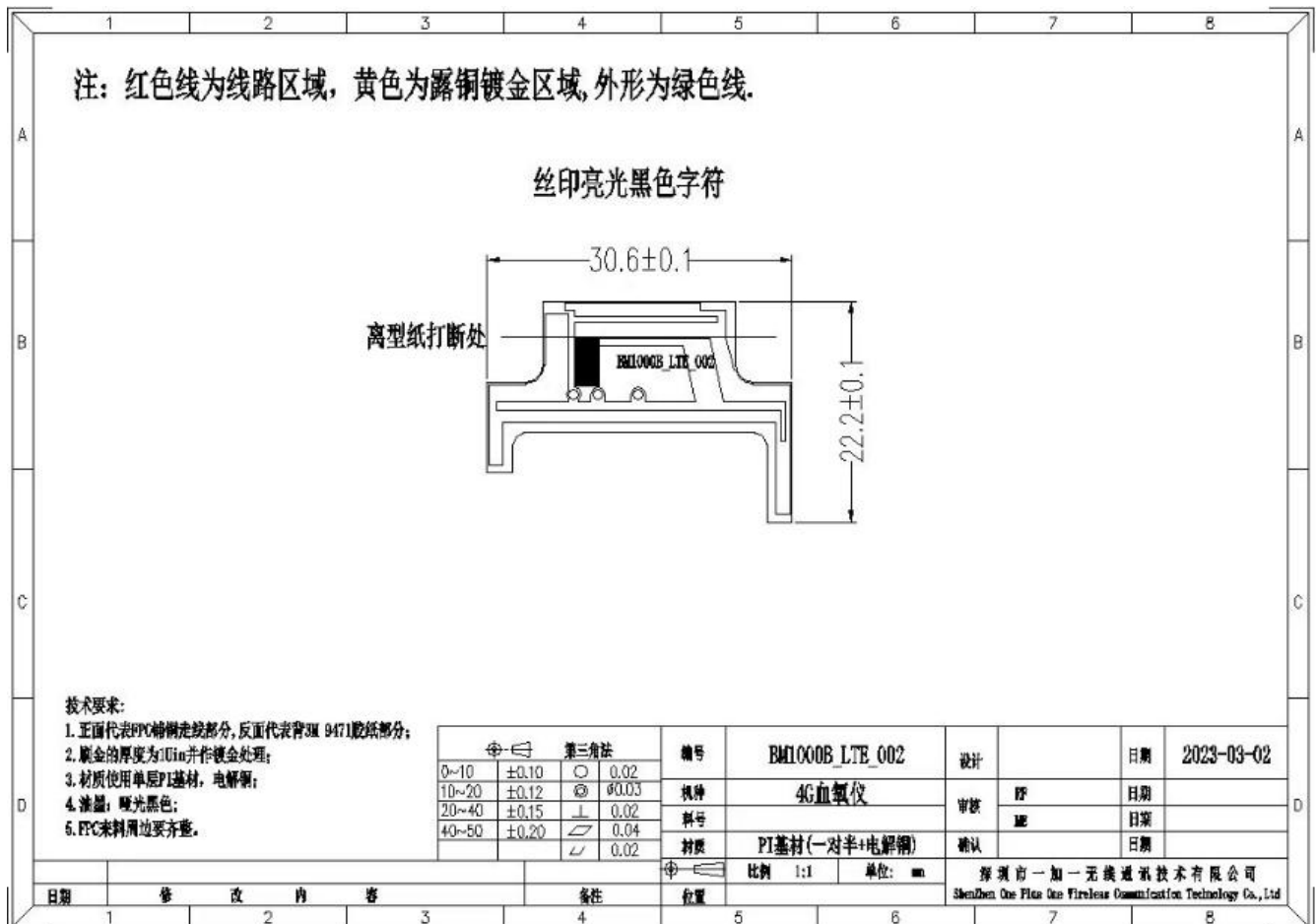


### 3.4 GPS Performance Descriptions

### 3.5 Environmental Manipulation

## 4 Mechanical description

### 4.1 Drawings



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