

ANTENNA TEST REPORT

Applicant	Drowsy Digital, INC
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Supplier	Shenzhen Top-link Technologies Co.,Ltd. 3rd Floor, Building A3, Zhengfeng Industrial Park, No.610 Fengtang Avenue, Zhancheng Community, Fuhai Street, Baoan District, Shenzhen, China.
Product	OZLO Sleepbuds 2
Product No.	01 002 1 C01 WW 01
Model	01 002 1
Peak Gain	Charge case antennae (PN: 1030045-01): BT/-0.2dBi/open; BT/1.1dBi/close ; BLE/0dBi/open; BLE/1.3dBi/close
Test person	Liu Feng
Date of test	2026/03/24

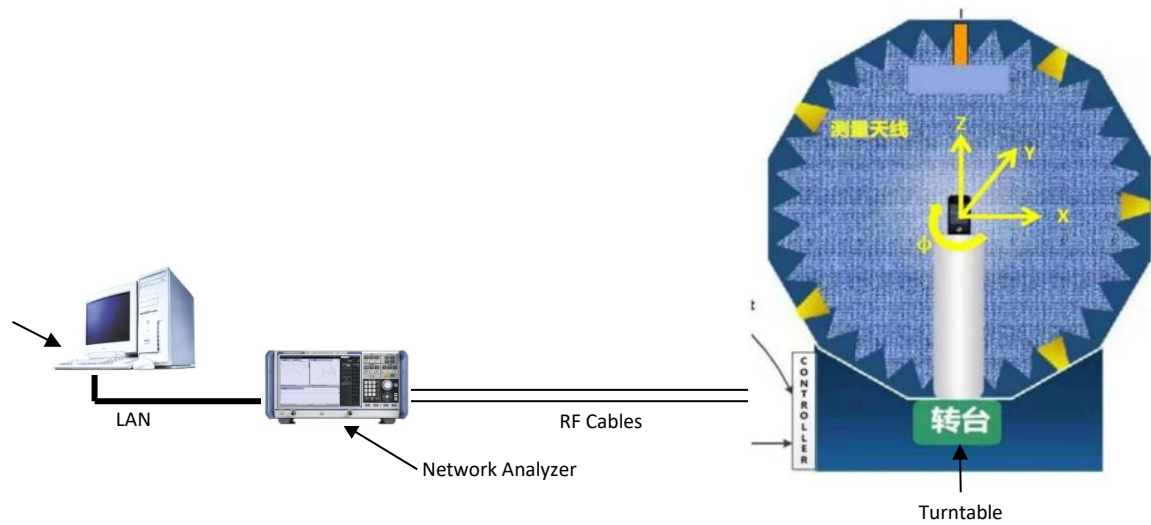
Approval	Written	Reviewed	Approved
	Liu Feng	Jiang Lingqing	Zhu Senyin
Data	2026/03/24	2026/03/25	2026/03/25

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1. MEASUREMENTS SETUP



2. PHOTOGRAPHS OF ANTENNA

3. TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna chamber	GTS	RayZone 1800	CT10116480A2084	2025/10/28	2026/10/27
Signal Generator	ROHDE&SCHWARZ	ZND	100269	2025/10/28	2026/10/27
Test Software	GTS	Libra		N/A	N/A

4. MEASUREMENTS DESCRIPTION

1. S Parameter Measurements

A testing method for evaluating the signal reflection performance of antennas. S Parameter measurements were done by using Network Analyzer –ROHDE&SCHWARZ, the Return Loss of the antennas were obtained to ensure the efficiency over the operation frequency.

2. Antenna Radiation Pattern Measurements

The distribution of radiation power from antennas in different directions. Radiation Pattern Measurements were done in the GTS anechoic chamber through radiation, the earbuds were set to continuous radiation and the RayZone 1800 receive the RF power from 360 degree angles by using rotation of DUT (Device under test).

3. Antenna Gain Calculation

Antenna gain is an important parameter for measuring antenna radiation. The antenna gains will be calculated by GTS chamber software when radiation pattern tests are done.

5. TEST RESULTS

5.1 CHARGE CASE BLE ANTENNA VSWR

Frequency (MHz)	2400	2480
Open state	2.3	3.3
Close state	2.5	1.7

5.2 CHARGE CASE BT ANTENNA VSWR

Frequency (MHz)	2400	2480
Open state	2.2	2.7
Close state	2.5	1.4

5.5 CHARGE CASE BLE ANTENNA EFFICIENCY

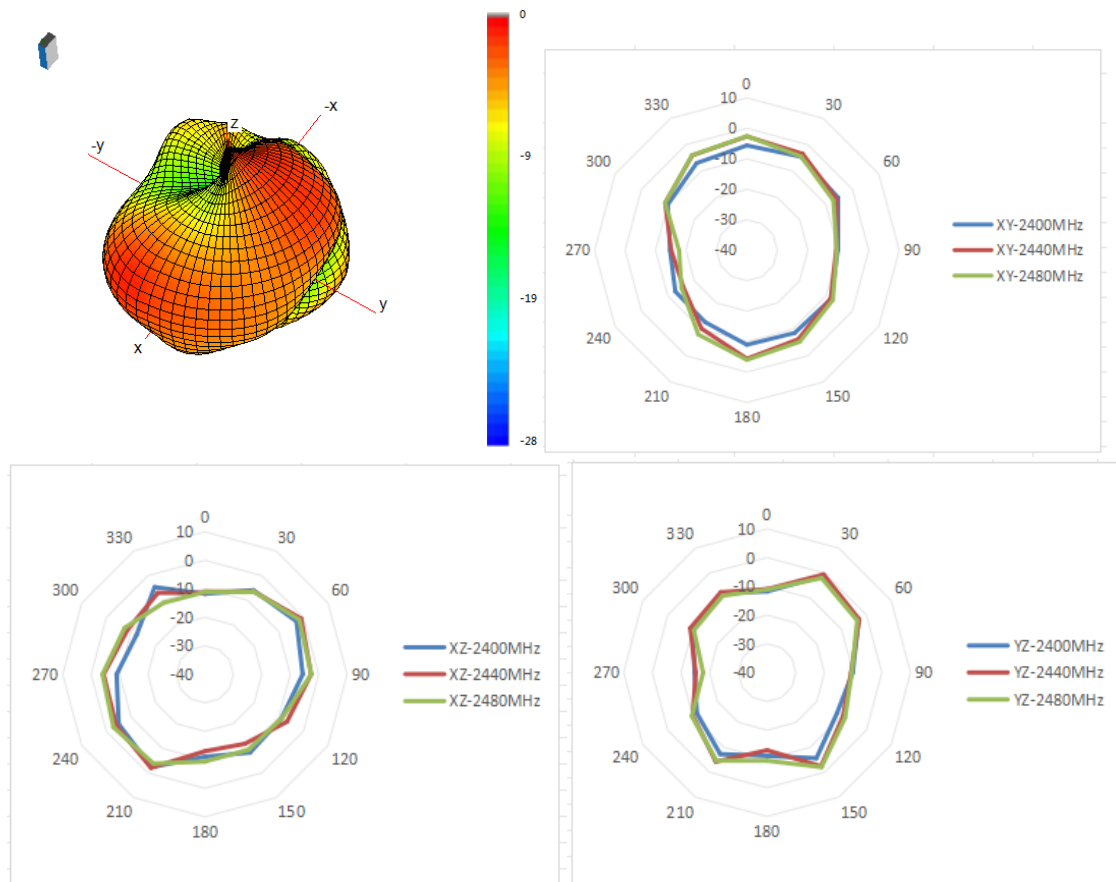
Frequency (MHz)	2400~2485
Open state	29.9%
Close state	46.2%

5.6 CHARGE CASE BT ANTENNA EFFICIENCY

Frequency (MHz)	2400~2485
Open state	38.3%
Close state	53.6%

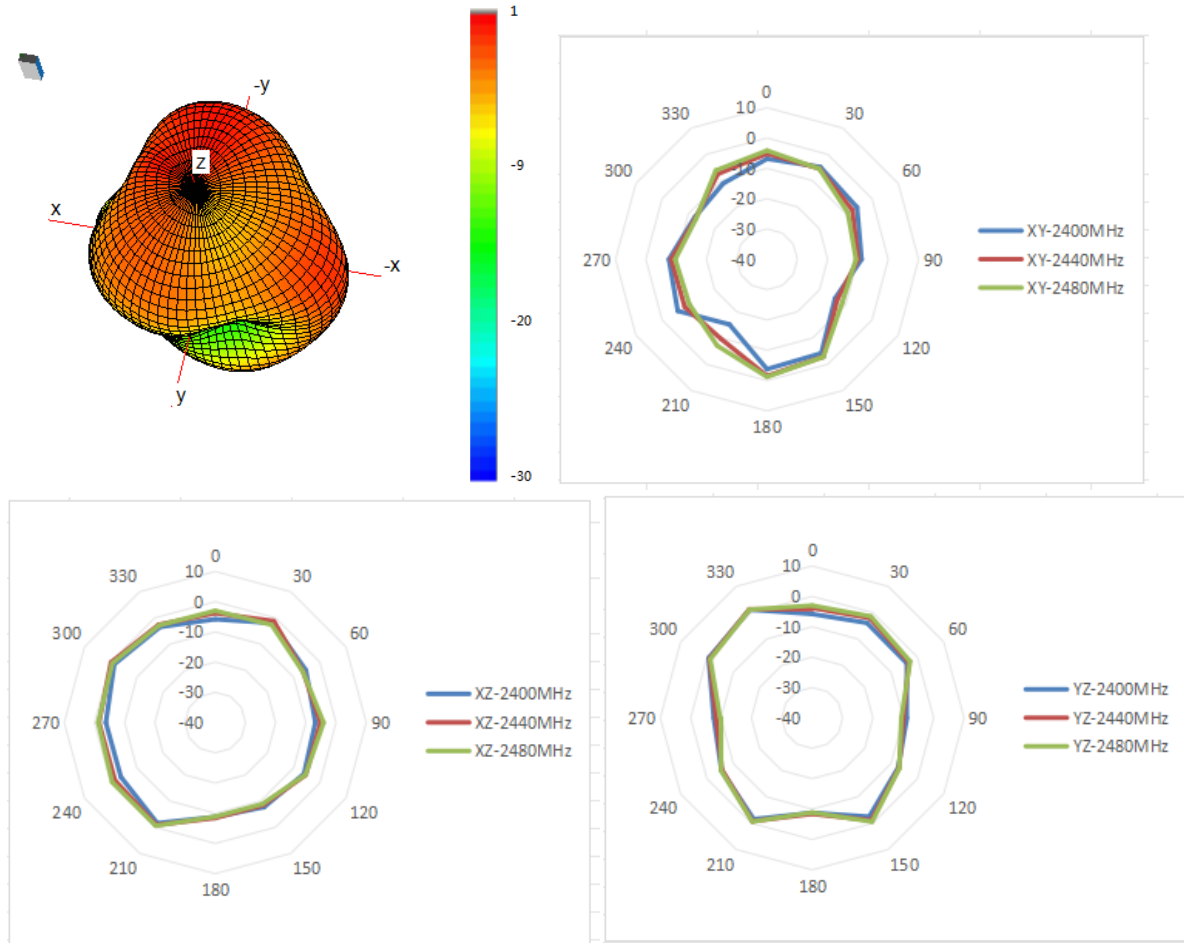
5.9 CHARGE CASE BLE ANTENNA OPEN STATE 2D

Frequency (MHz)		XY	XZ	YZ
2400	Peak Gain (dBi)	-4.6	-2.4	-1.2
	Degree	30°	210°	30°
2440	Peak Gain (dBi)	-2.7	-0.9	-0.6
	Degree	0°	60°	30°
2485	Peak Gain (dBi)	-2.5	-1.6	-2
	Degree	0°	60°	30°



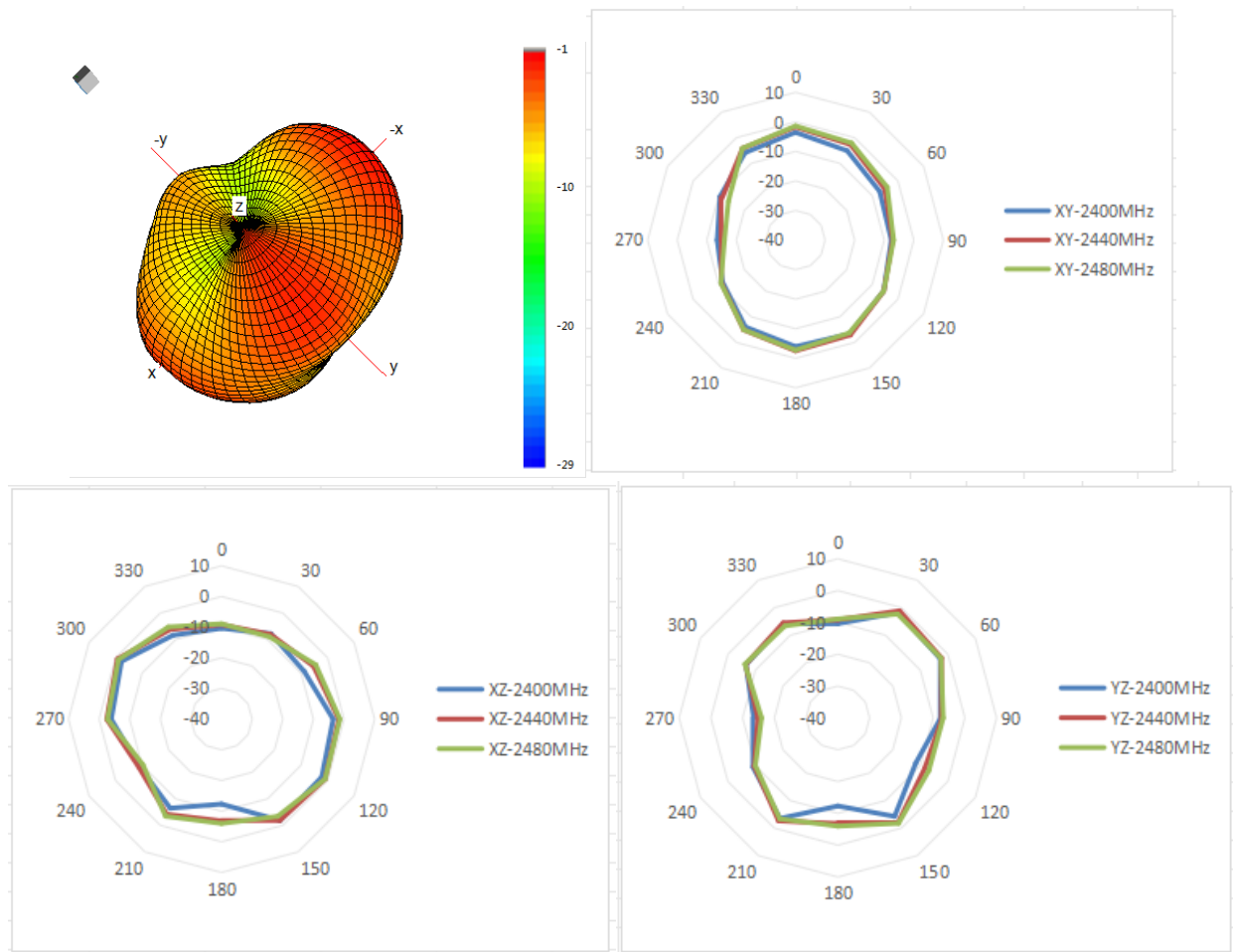
5.10 CHARGE CASE BLE ANTENNA CLOSE STATE 2D

Frequency (MHz)		XY	XZ	YZ
2400	Peak Gain (dBi)	-3.8	-1.4	1.2
	Degree	180°	300°	300°
2440	Peak Gain (dBi)	-1.5	-0.2	1.3
	Degree	180°	300°	300°
2485	Peak Gain (dBi)	-1.2	-0.6	1.2
	Degree	180°	210°	300°



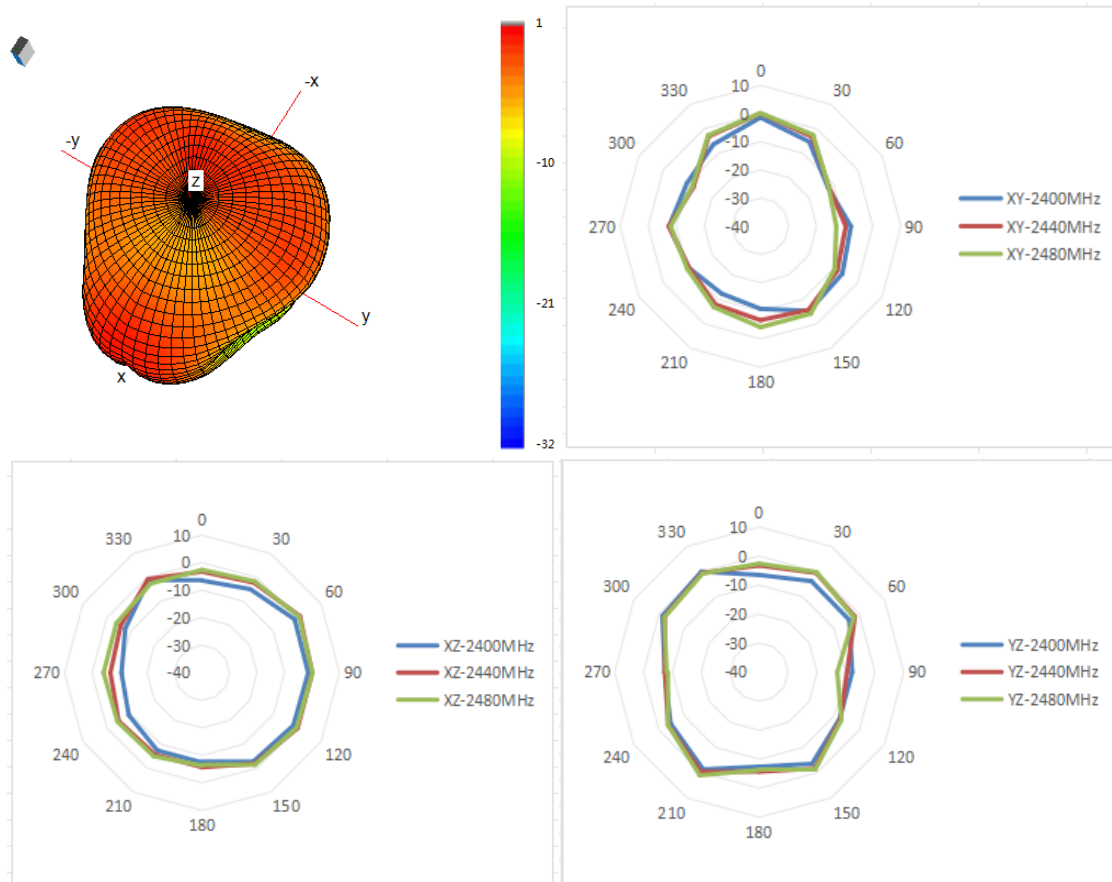
5.11 CHARGE CASE BT ANTENNA OPEN STATE 2D

Frequency (MHz)		XY	XZ	YZ
2400	Peak Gain (dBi)	-3.4	-1.9	-1.8
	Degree	150°	150°	30°
2440	Peak Gain (dBi)	-1.7	-0.8	-1.2
	Degree	0°	300°	30°
2485	Peak Gain (dBi)	-1.4	-1	-1.8
	Degree	0°	120°	150°



5.12 CHARGE CASE BT ANTENNA CLOSE STATE 2D

Frequency (MHz)		XY	XZ	YZ
2400	Peak Gain (dBi)	-1.4	-1.1	0
	Degree	0°	60°	330°
2440	Peak Gain (dBi)	0.1	1.1	0
	Degree	0°	60°	210°
2485	Peak Gain (dBi)	0.2	0.8	1
	Degree	0°	60°	210°



6. PHOTOGRAPHS OF THE TEST CONFIGURATION