

ANTENNA PASSIVE TEST REPORT

Application No. SZCR2401000206ME
Applicant Guangdong Genial Technology CO., Ltd.
Manufacturer Guangdong Genial Technology CO., Ltd.
Product Name Wearable Digital Thermometer
Model No. T31
Trade Mark: GENIAL
Standards ANSI/IEEE Std 149-2008
Date Initial Sample(s) Received 2024-01-15
Testing Start Date 2024-01-16
Testing Finish Date 2024-01-16
Report Issue Date 2024-01-17

***In the configuration tested, the EUT detailed in this report complied with the standards specified above.**



Keny Xu
EMC Laboratory Manager



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SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

SZEMC-TRF-01 Rev. A/1

Report No.: SZCR240100020601

Page: 2 of 17

Revision Record				
Version	Chapter	Date	Modifier	Remark
01		2024-01-15		Original

Authorized for issue by:				
		Mark Mao		
		Reviewed by Mark Mao		
		Eric Fu		
		Approved by Eric Fu		



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SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch
Inspection & Testing Services

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn
中国·广东·深圳市南山区科技园中区M-10栋1号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



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2 Revision Version

Report No.	Version	Date	Memo
SZCR2401000206ME	00	01/17	Initial creation of report



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No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
中国·广东·深圳市南山区科技园中区M-10栋1号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

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4 General Information

4.1 Testing Laboratory

Test Lab	SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch
Address	No.1 Workshop, M-10, Middle section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057
Contact	Mark Mao
Tel.	+86 (0) 755 2532 8628
Fax	+86 (0) 755 2671 0594
E-mail	Mark.Mao@sgs.com

4.2 Details of Applicant

Applicant's Name	Guangdong Genial Technology CO., Ltd.
Applicant's Address	I-6-05-02, 11th Road, Area B, Guangfozhao Economic Cooperation Zone, Zhagang Town, Huaiji County, Zhaoqing City, Guangdong Province, 526437, P.R. China
Contact	Yu Jun
Tel.	+86 13423669481
E-mail	admin@genial.cn

4.3 Details of Manufacturer

Manufacturer's Name	Guangdong Genial Technology CO., Ltd.
Manufacturer's Address	I-6-05-02, 11th Road, Area B, Guangfozhao Economic Cooperation Zone, Zhagang Town, Huaiji County, Zhaoqing City, Guangdong Province, 526437, P.R. China
Contact	Yu Jun
Tel.	+86 13423669481
E-mail	admin@genial.cn

4.4 General Description of EUT

Device Description:	Wearable Digital Thermometer
Device Model:	T31
Hardware Version:	N/A
Software Version:	N/A
S/N:	N/A



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Shenzhen Branch Inspection & Testing Laboratory

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn
中国·广东·深圳市南山区科技园中区M-10栋1号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

4.5 Test Procedure

Testing is performed according to the **ANSI/IEEE Std 149-2008**.

4.6 Test Specification

Identity	Document Title
ANSI/IEEE Std 149-2008	IEEE Standard Test Procedures for Antennas

4.7 Laboratory Environment

Temperature	Min. =19℃, Max. = 25℃	
Relative humidity	Min. =40%, Max. =72%	
Shield effect	0.7-6GHz	> 100dB
Ground resistance	<0.5Ω	



4.8 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen Branch

No. 1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China. 518057.

Tel: +86 755 2601 2053 Fax: +86 755 2671 0594

No tests were sub-contracted.

4.9 Test Facility

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

• A2LA (Certificate No. 3816.01)

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 3816.01.

• VCCI (Member No. 1937)

The 3m Fully-anechoic chamber for above 1GHz, 10m Semi-anechoic chamber for below 1GHz, Shielded Room for Mains Port Conducted Interference Measurement and Telecommunication Port Conducted Interference Measurement of SGS-CSTC Standards Technical Services Co., Ltd.

Shenzhen EMC laboratory have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-20026, R-14188, C-12383 and T-11153 respectively.

• FCC –Designation Number: CN1336

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized as an accredited testing laboratory.

Designation Number: CN1336. Test Firm Registration Number: 787754.

• Innovation, Science and Economic Development Canada

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0006.

IC#: 4620C.

4.10 Deviation from Standards

None

4.11 Abnormalities from Standard Conditions

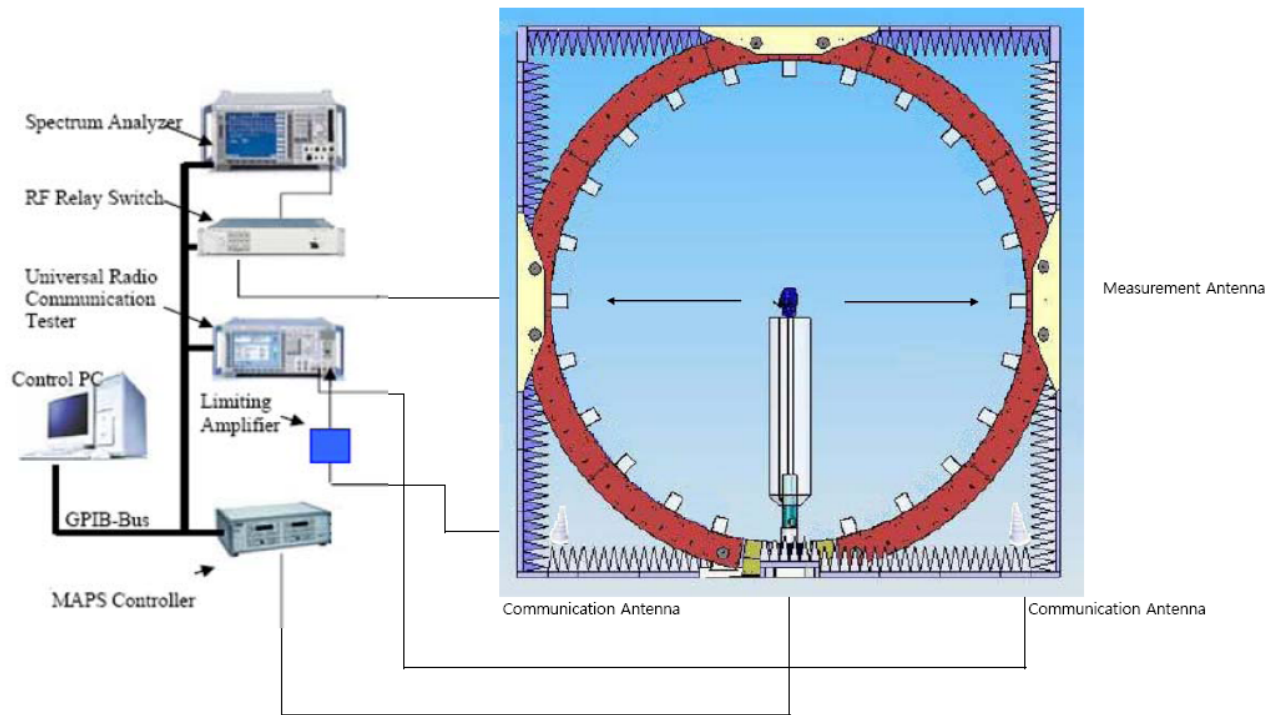
None



5 OTA Measurements System Configuration

5.1 Test Configuration

Great-Circle-Cut method is used to measure the antenna 3D GAIN of EUT in OTA qualified anechoic chamber. Equipment Under Test (EUT) geometry centre vertical projection at the centre of platform, the distance from EUT to measurement antenna is 5m



F-1. OTA Measurement System Configuration

6 Equipment List

Type of Equipment	Model Number	Manufacture	Calibration Date	Valid Period
Network Analyzer	E5071C S/N MY46523591	Keysight	2023/2/16	2024/2/15
Quad-Ridge Horn Antenna 700 MHz-10 GHz	EMCO 3164-08 S/N 161915	ETS-Lindgren L.P.	N/A	N/A
MAPS Controller	EMCENTER S/N 160485	ETS-Lindgren L.P.	N/A	N/A

7 Measurement Uncertainty

Item	2400-2500 MHz (dB)
Gain	-5.26
Efficiency	6.01
Measurement Uncertainty (95% CONFIDENCE INTERVAL) K=2	



8 Test Result

8.1 Test summary

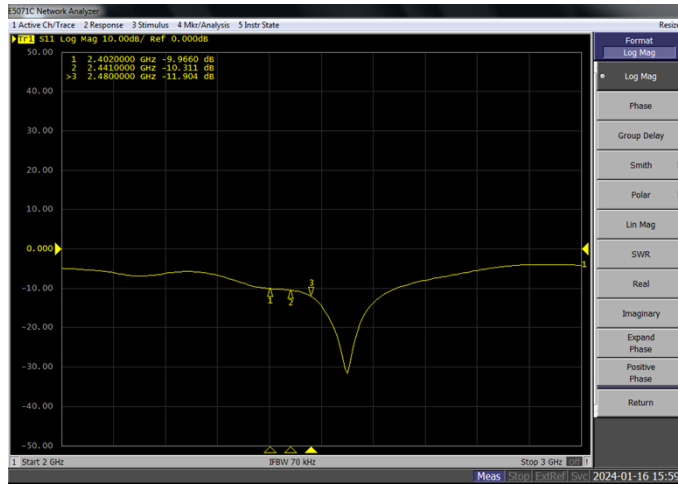
product	Maximum Gain Data			
	Frequency (MHz)	Efficiency (dB)	Efficiency (%)	Gain (dBi)
BT antenna	2450	-12.27	5.93	-5.26

8.2 BT Antenna Test Results

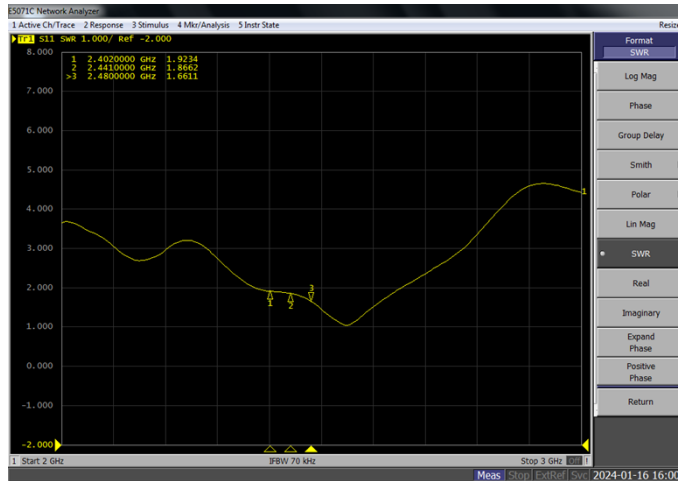
Frequency (MHz)	Efficiency (dB)	Efficiency (%)	Gain (dBi)
2400	-12.85	5.19	-5.77
2402	-13.03	4.98	-6.04
2405	-13.05	4.95	-6.04
2410	-12.89	5.14	-5.83
2415	-12.93	5.09	-6.00
2420	-12.62	5.47	-5.64
2425	-12.57	5.53	-5.63
2430	-12.66	5.41	-5.68
2435	-12.60	5.49	-5.57
2440	-12.63	5.45	-5.60
2441	-12.60	5.50	-5.58
2445	-12.32	5.86	-5.34
2450	-12.27	5.93	-5.26
2455	-12.21	6.01	-5.31
2460	-12.40	5.76	-5.49
2465	-12.63	5.46	-5.86
2470	-12.93	5.10	-6.14
2475	-13.26	4.72	-6.59
2480	-13.48	4.49	-6.93
2482	-13.52	4.45	-7.08
2485	-13.62	4.34	-7.28
2490	-13.59	4.38	-7.31
2495	-13.40	4.57	-7.07
2500	-13.23	4.76	-6.96

9 Pattern Plots

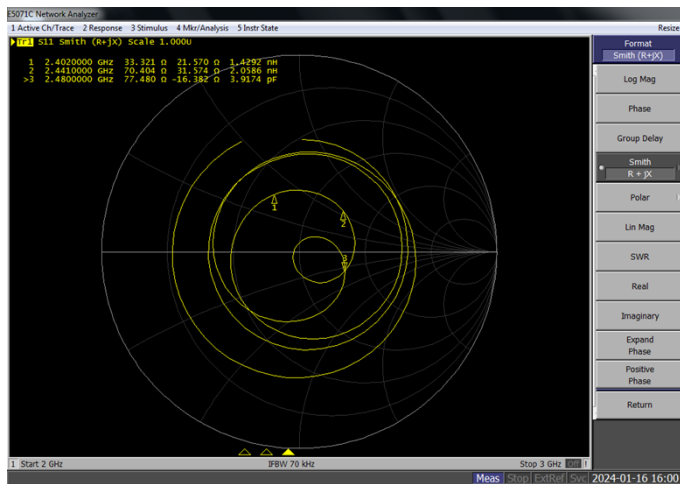
Return Los



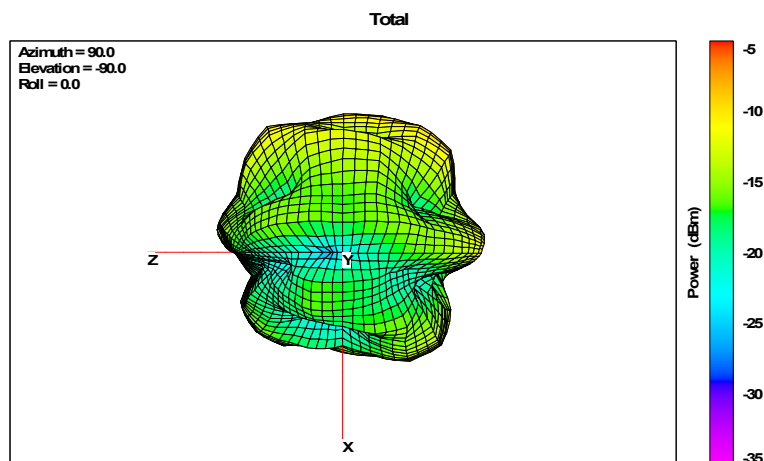
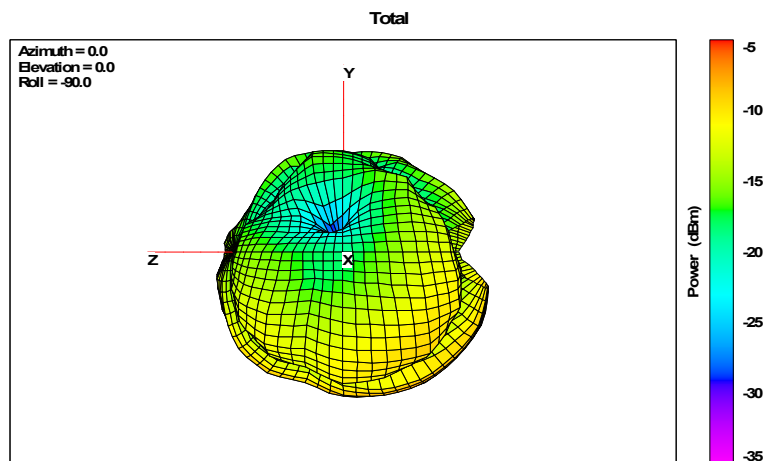
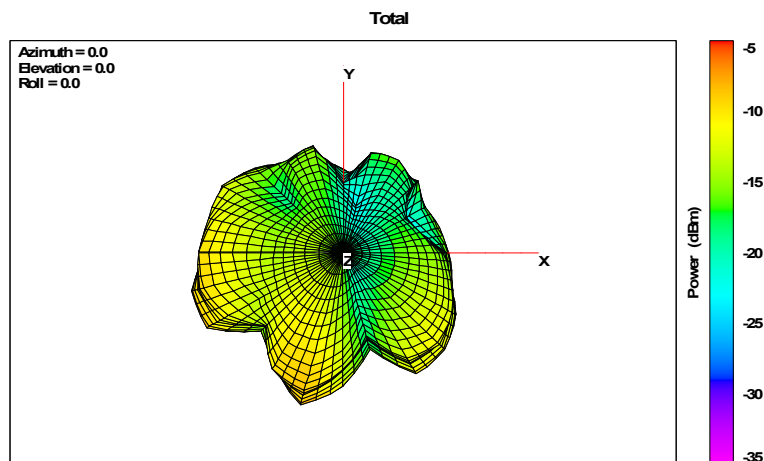
VSWR

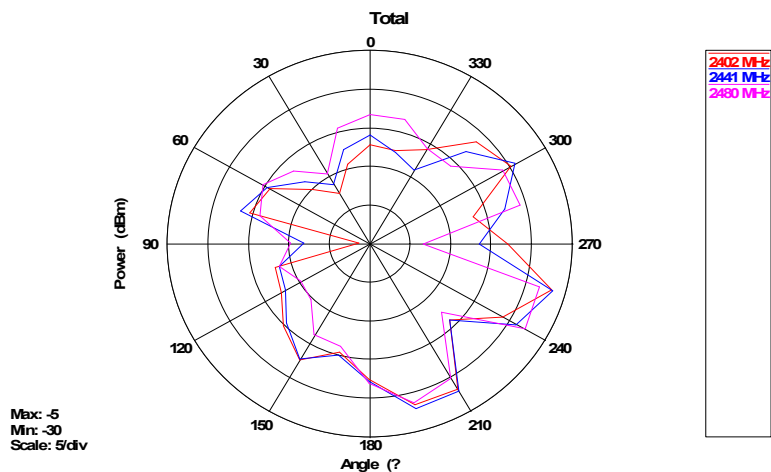


Stimulus



10 3-D Antenna Pattern



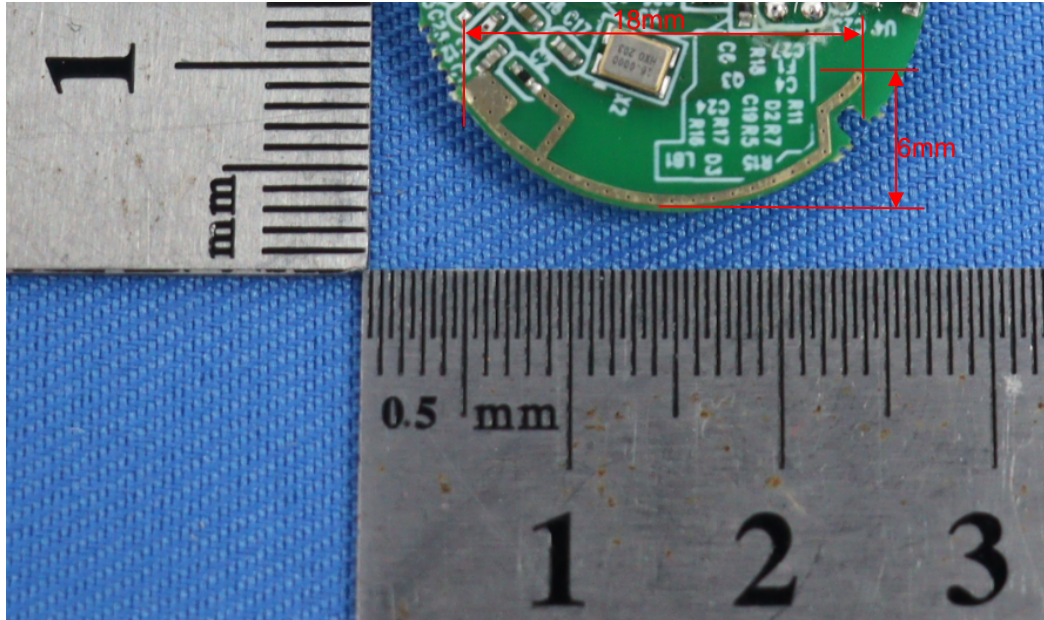


BT Antenna 3-D Antenna Pattern



11 The EUT and Test Configuration

Size of the Antenna



Size of the Antenna in the EUT



Free Space View



- End of the Report -

