Antenna Specification

Product Name: TMB-2287-BK, TMB-2287-B

Issue Date: 2023. 6. 28

Content

1. General Information

1.1 General information of testing institutions
1.2 Test equipment
1.3 Test environment
1.4 Statement

2. Sample Information

2.1 Client information
2.2 Description of EUT(S)
2.3 EUT appearance
2.4 DUT setup photo of free space OTA testing

3. Test Result

3.1 Test standard
3.2 Test uncertainty
3.3 Test data
3.3.1 S1l parameters
3.3.2 VSWR
3.3.3 Typical free space efficiency and gain
3.3.4 Typical free space radiation patter

1. General Information

1. 1 General information of testing institutions

Name	Shenzhen DBT Communication Device Co., Ltd
Address	Rm505, 8th building, Yungu 2nd period, pingshan No.1 Road, Xili Town,Nanshan District, ShenZhen , China
Tel	0755-83763273
E-mail	Dbt_yang@163.com
Equipment	1. RayZone 1800 2. Keysight E5071C

1.3 Test environment

Temperature	25. 0*C
Humidity	59%RH
Pressure	100.12kPa

1.4 Statement

(1) The test results in the report are only applicable to the tested samples and the tested samples work under the environment described in the report

(2) Any objection to this report shall be raised 30 days after formal confirmation of the report.

(3) The report is invalid without the signature of the auditor and approver.

2.Sample Information

2.1 Client information

Name	Guangdong Transtek Medical Electronics Co., Ltd.
Address	Zone A, No. 105, Dong Li Road, Torch Development District, zhongShan, Guangdong, China

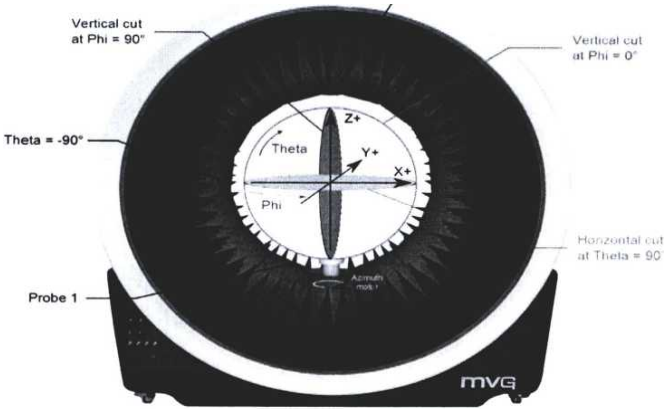
2.2 Description of EUT(S)

Product Name	2.4 GHz Antenna
Antenna Size	13.5*7.5mm
Antenna Type	PCB
Test Item	VSWR; Gain; Efficiency; Radiation pattern
Frequency Range	2402-2480MHz
Received Date	2023.8.25
Test Date	2023.8.25
Remark	

2.3 EUT appearance

See test report

2.4 DUT setup photo of free space OTA testing



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3.Test Results

3.1 Test standard

Name	Parameter	Method	Standard no.
Mobile Communication antenna	VSWR	Generic specification for antennas used in the mobile communications	GB/T 9410-2008
	Antenna gain		
	Radiation pattern		
Antenna	Radiation efficiency	IEEE Standard Test Procedures for Antennas	ANSI/IEEE Std 149-1979

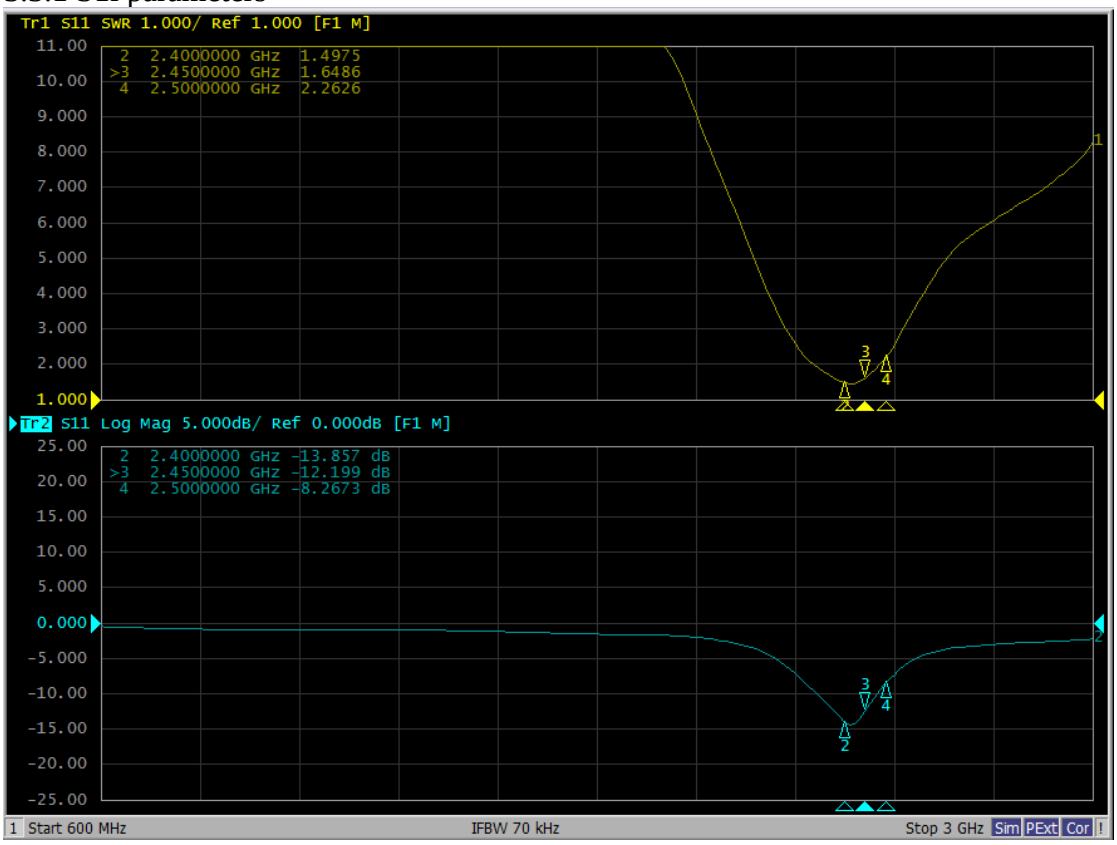
3.2 Test uncertainty

The uncertainty was calculated on the basis of the GUM published by ISO.using the inclusion factor of K=2 and the 95% confidence level to express the extended uncertainty.

Item	Uncertainty
VSWR	±0.3
Antenna gain	+ ldB
Radiation efficiency	±10%

3.3 Test data

3.3.1 S1l parameters



3.3.2 VSWR

Frequency/MHz	2400	2450	2500
VSWR	1.4975	1.6486	2.2626

3.3.3 Typical free space efficiency and gain

Frequency MHz	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Peak Gain dBi	0.27	0.02	-0.38	-0.05	-0.4	0.02	-0.6	-0.28	-0.34	-0.75	-0.6
Efficiency %	46.29	45.54	42.95	46.76	43.21	46.53	41.35	46.14	46.96	45.04	47.86

3.3.4 Typical free space radiation p atter