

SPECIFICATION FOR APPROVAL

CUS PART NO : GK5
PART NAME : Bluetooth module
Antenna Model : GK5S-ZP26
Date of Issue : December 24, 2025

Version

Version No.	Date	Description
00	December 24, 2025	Original

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1. General Information

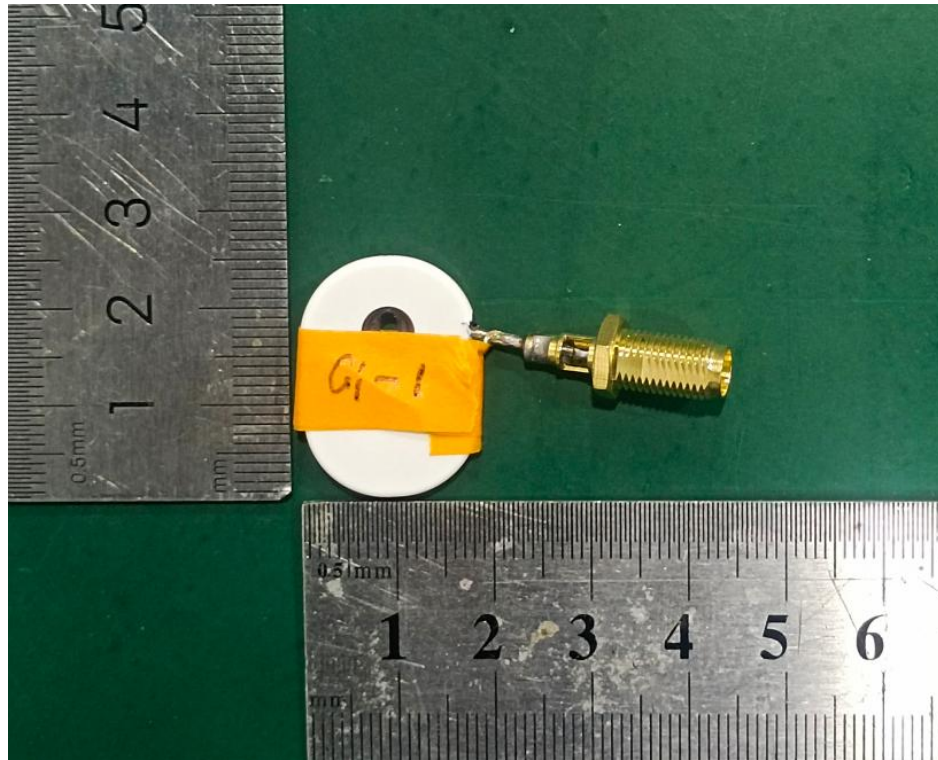
Name	Bluetooth module
Model Type	PCB Antenna
Frenquency Range	2400-2500 MHz
Size	12.44 ×4.73 mm
Impedance	50 Ω
Max Gain	-4.53 dBi
Antenna Manufacture	Shenzhen SiSensing Co., Ltd.
Antenna Manufacture Address	Room 901, Building 1, Gaoshi Jiulongshan Technology Park, No. 26 Shijing Road, Fumin Community, Fucheng Street, Longhua District, 518110 Shenzhen, Guangdong, PEOPLE'S REPUBLIC OF CHINA

2.Sample Information

2.1 Description of EUT(S)

Test Item	VSWR;Antenna gain; Efficiency; Radiation pattern
Frequency Range	2400-2500MHz
Received Date	December 16, 2025
Test Date	December 18, 2025

2.2 EUT appearance



View Of Product-01

2.3 EUT setup photo of free space OTA testing



Sample testing status 1: free state



Sample testing status 2 : Close to the arm

3. Test Results

3.1 Test uncertainty

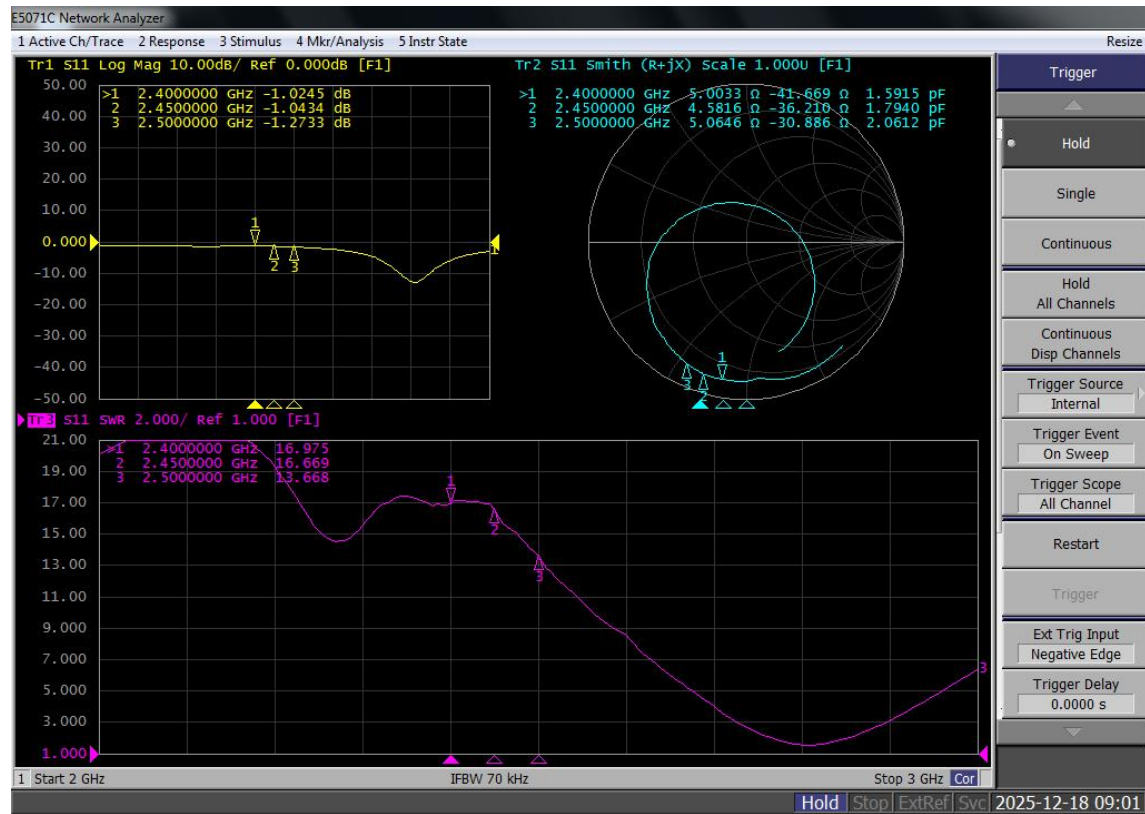
The uncertainty was calculated on the basis of the GUM published by ISO, using the inclusion factor of $K=2$ and the 95% confidence level to express the extended uncertainty.

Item	Uncertainty
VSWR	± 0.3
Radiation efficiency	$\pm 0.72\text{dB}$

3.2 Test data

3.2.1 Sample testing status 1: free state

3.2.1.1 VSWR parameters



3.2.1.2 VSWR data

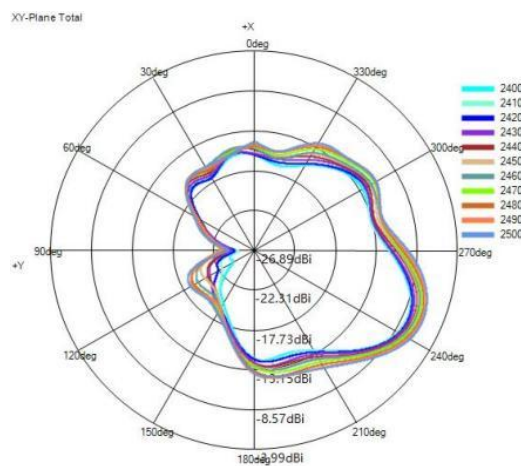
Frequency/MHz	2400	2450	2500
VSWR	16.975	16.669	13.668

3.2.1.3 Typical free space efficiency and gain

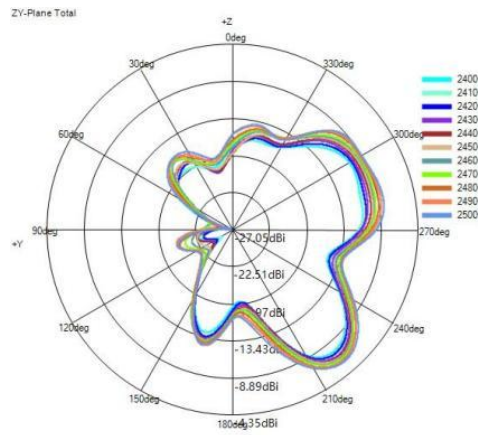
Frequency ID	Freq(MHz)	Gain(dBi)	Efficiency(%)
1	2400	-6.43	3.75
2	2410	-6.24	3.89
3	2420	-6.25	3.98
4	2430	-6.07	4.21
5	2440	-5.72	4.45
6	2450	-5.41	4.67
7	2460	-5.28	4.84
8	2470	-5.05	5.04
9	2480	-4.78	5.36
10	2490	-4.59	5.51
11	2500	-4.53	5.68

3.2.1.4 Radiation pattern

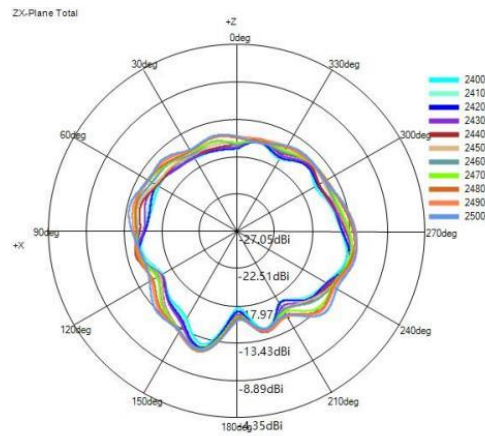
(1) XY-Plane Total:



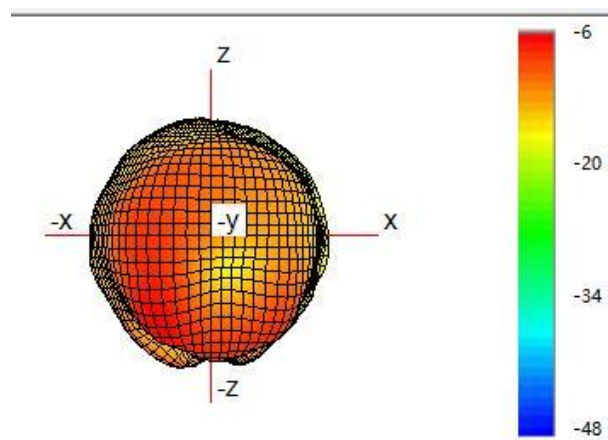
(2) ZY-Plane Total:



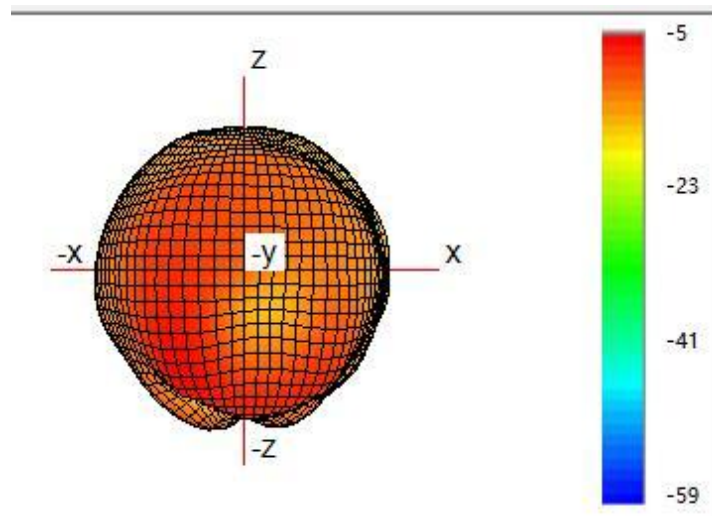
(3) ZX-Plane Total:



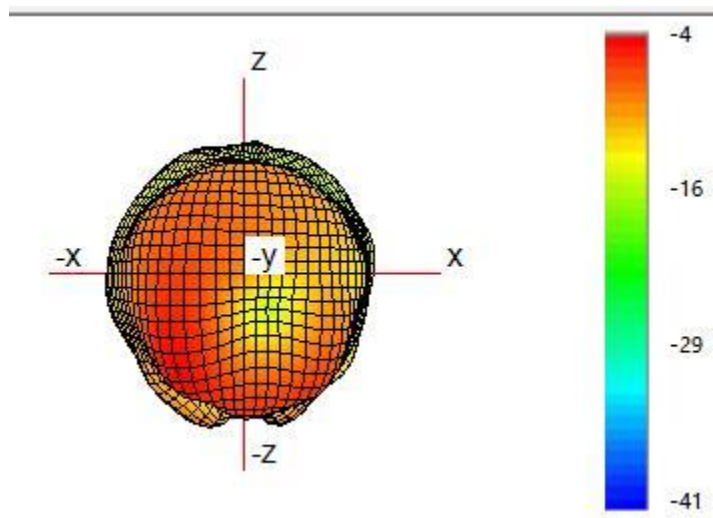
(4) Typicall Free Space 3D Radiation Pattern at 2400MHz(unit:dBi)



(5) Typical Free Space 3D Radiation Pattern at 2450MHz(unit:dBi)

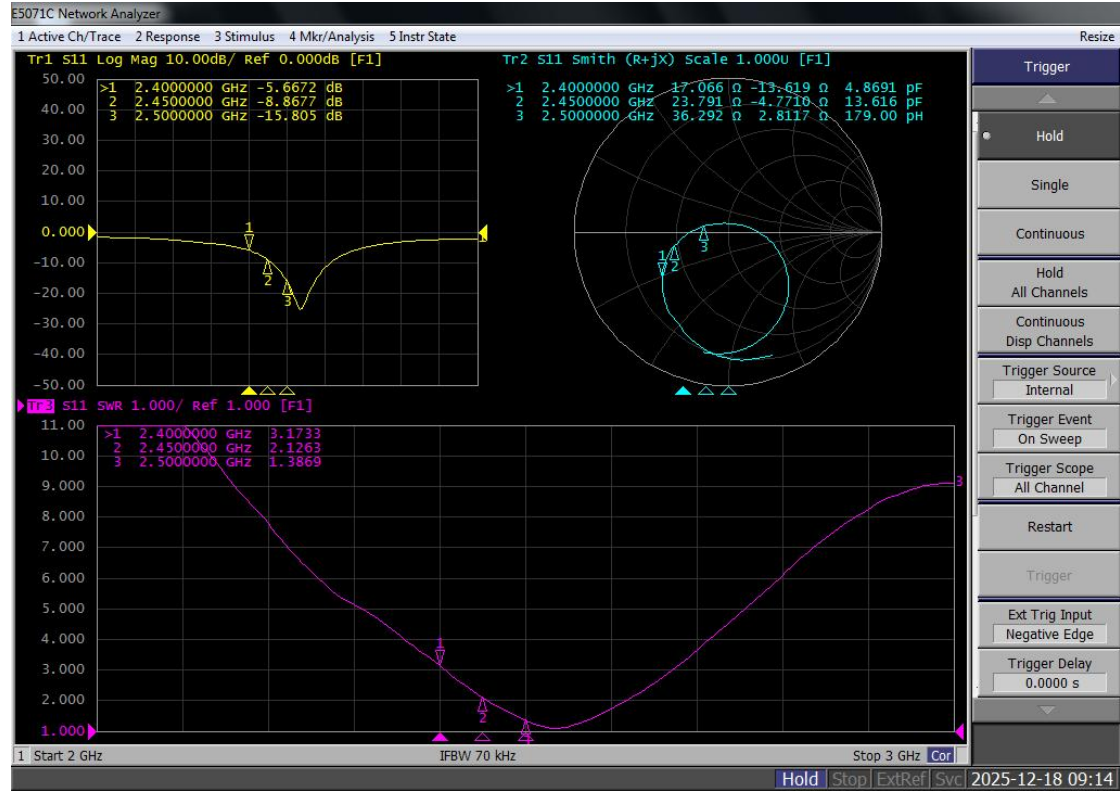


(6) Typical Free Space 3D Radiation Pattern at 2500MHz(unit:dBi)



3.2.2 Sample testing status 2: Close to the arm

3.2.2.1 VSWR parameters



3.2.2.2 VSWR data

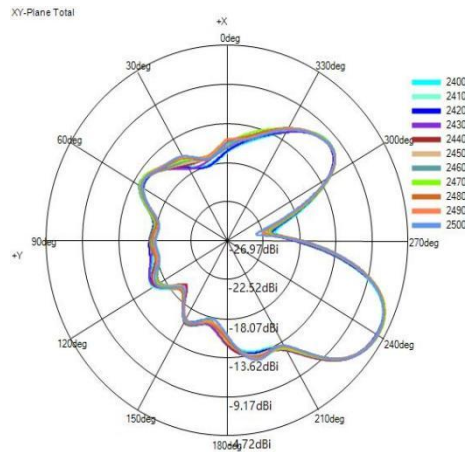
Frequency/MHz	2400	2450	2500
VSWR	3.1733	2.1263	1.3869

3.2.2.3 Typical free space efficiency and gain

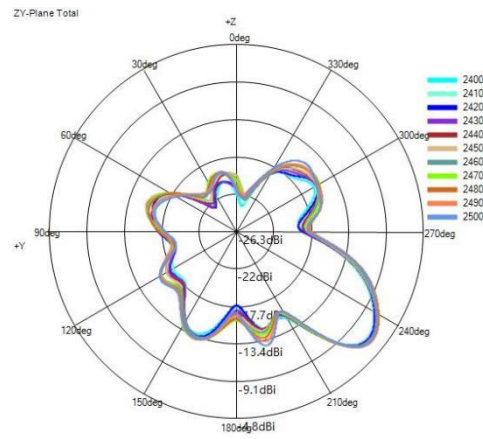
Frequency ID	Freq(MHz)	Gain(dBi)	Efficiency(%)
1	2400	-5.75	4.22
2	2410	-5.69	4.27
3	2420	-5.55	4.31
4	2430	-5.29	4.45
5	2440	-5.16	4.52
6	2450	-5.21	4.53
7	2460	-5.01	4.62
8	2470	-4.94	4.69
9	2480	-4.89	4.64
10	2490	-4.83	4.58
11	2500	-4.92	4.53

3.2.2.4 Radiation pattern

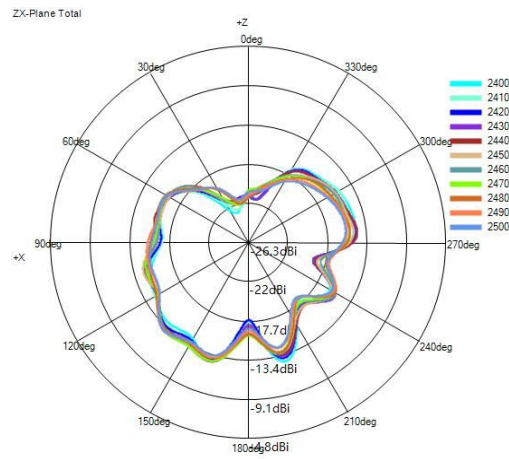
(1) XY-Plane Total:



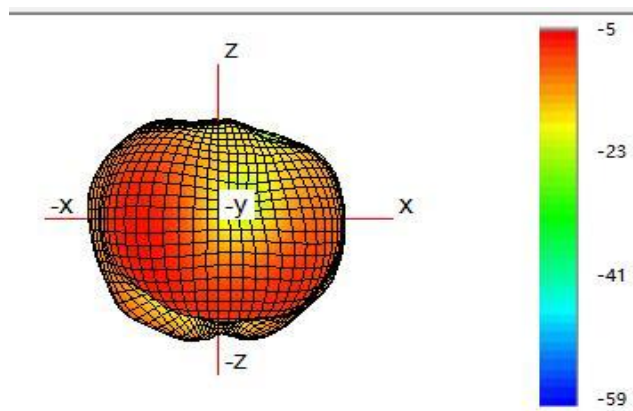
(2) ZY-Plane Total:



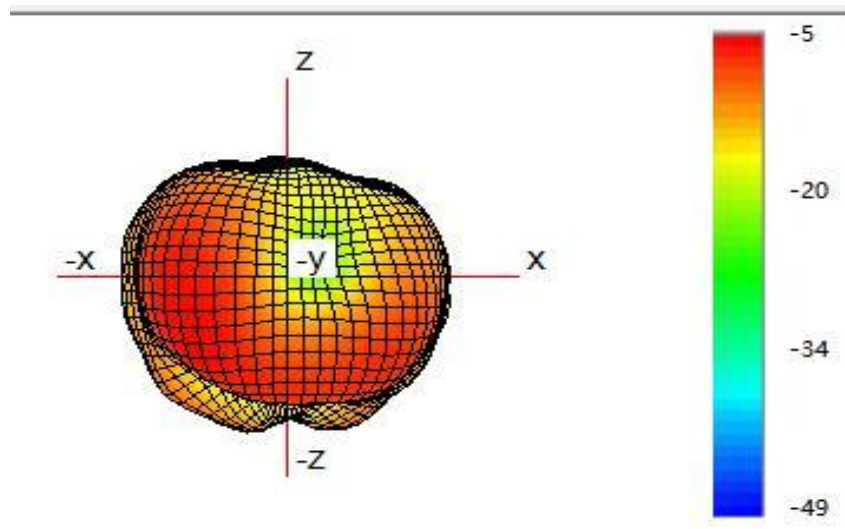
(3) ZX-Plane Total:



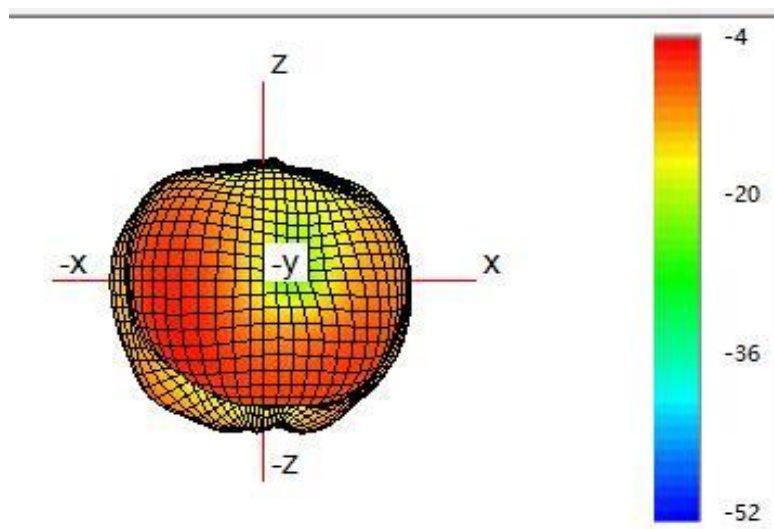
(4) Typical Free Space 3D Radiation Pattern at 2400MHz(unit:dBi)



(5) Typical Free Space 3D Radiation Pattern at 2450MHz(unit:dBi)



(6) Typical Free Space 3D Radiation Pattern at 2500MHz(unit:dBi)



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