

SPECIFICATION FOR APPROVAL

CUSTOMER: Shenzhen Seeed Technology Co., Ltd

CUSTOMER PARTNO:

SUPPLIER: ShenZhen MyAntenna RF Technology Co.,Ltd

PRODUCT MODEL: Seeed XIAO ESP32C3

PRODUCT NAME: Seeed XIAO ESP32C3 2.4G Antenna

PRODUCT CODE: M01-0600890R0A 318020748

CUSTOMER SIGNATURE:	CUSTOMER SEAL:
----------------------------	-----------------------

SUPPLIER SIGNATURE:	SUPPLIER SEAL:
----------------------------	-----------------------

NOTE: PLEASE RETURN THIS COPY AS A CERTIFICATION OF YOUR APPROVAL

Prepared by: Dong	Date: 2022.06.13	Add:	Room 405, building R3-A, South District, Nanshan Science Park, Shenzhen
		Tel:	0755-86503881
		Fax:	0755-27801677

VERSION INFORMATION					
Version	DATE	REVISION DESCRIPTION	PREPARED	CHECKED	APPROVED
A	2022.05.13	First edition release	Dong	Chen	Yang
B	2022.06.06	Add information such as packaging	Dong	Chen	Yang
C	2022.06.13	Change FPC	Dong	Chen	Yang

PERFORMANCE PARAMETER

1. Electrical Characteristics

1	Frequency Range	2400MHz-2500MHz
2	V. S. W. R	≤2.0
3	Gain	2.90dBi
4	Efficiency	70.5%
5	Impedence	50 Ω
6	Polarization mode	Vertical
7	Interface type	IPEX connect

2. Mechanical parameters

1	Measure	FPC:40*20mm Cable: 1.13*80.0mm
2	Color	BLACK

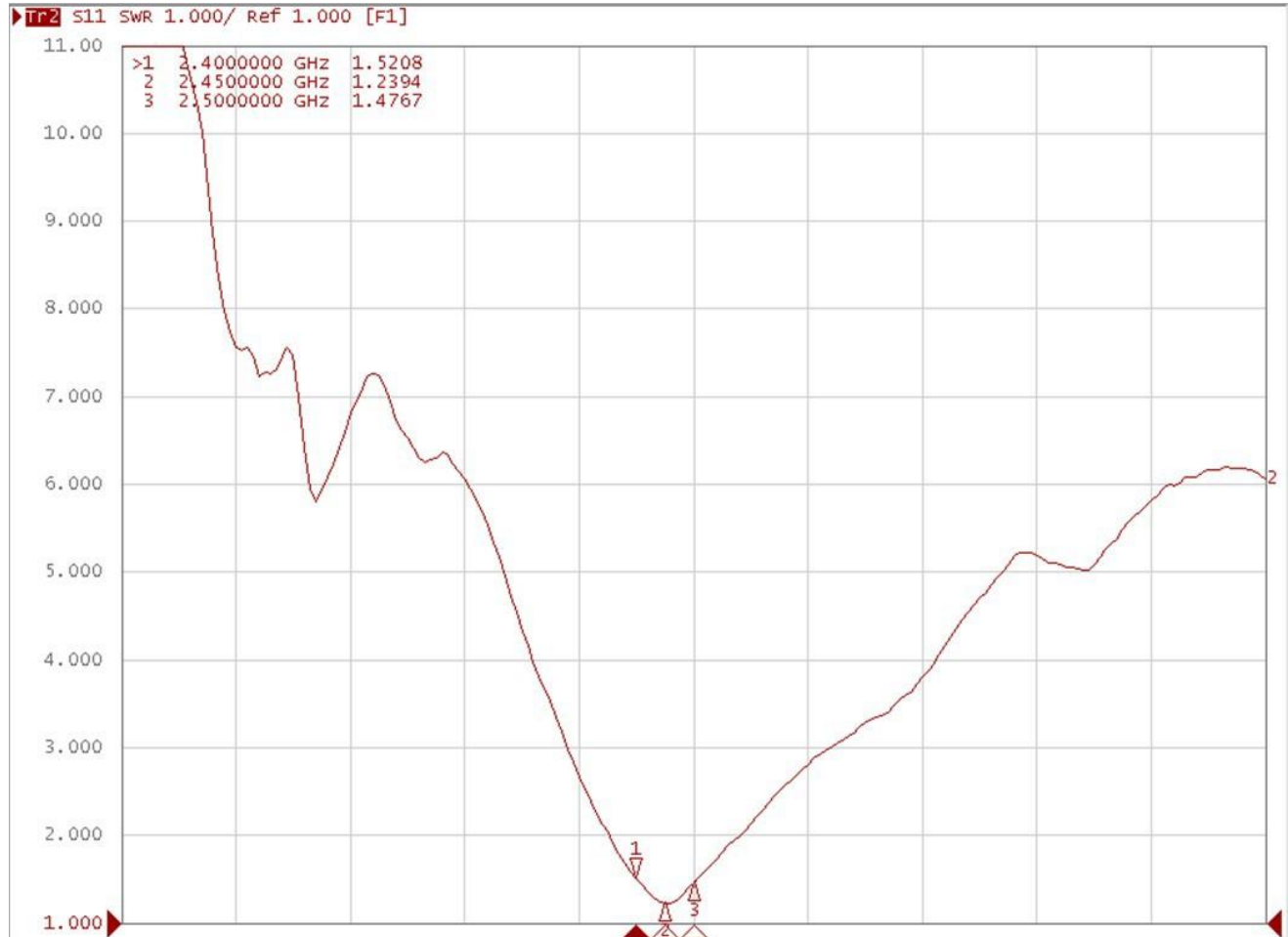
3.Environment Condition

1	Working Temp	-30℃~80℃
---	--------------	----------

TESTING CURVE

1. Performance test

1.1 V.S.W.R



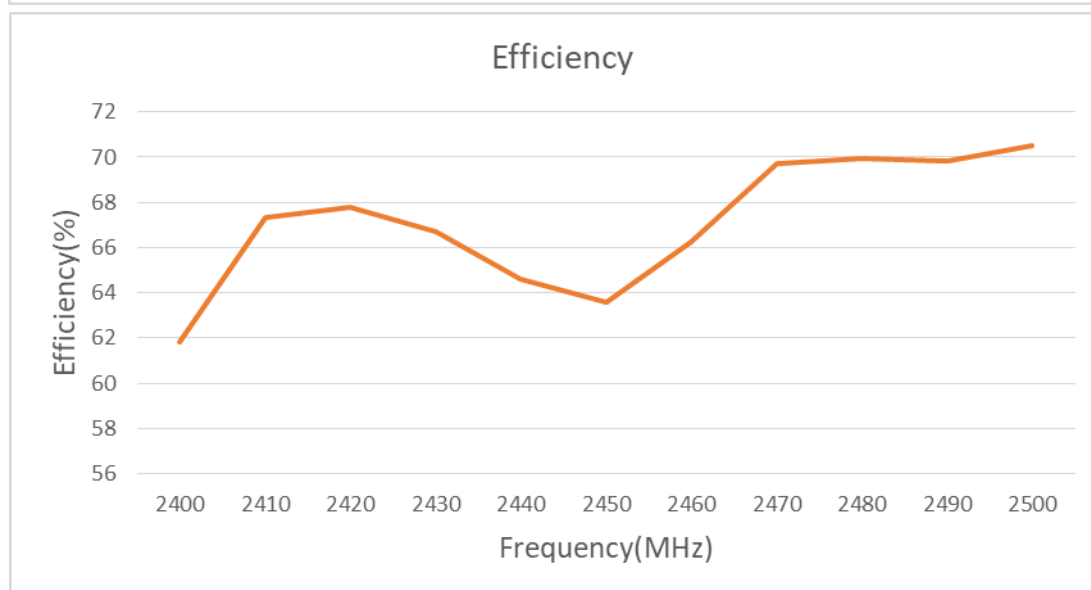
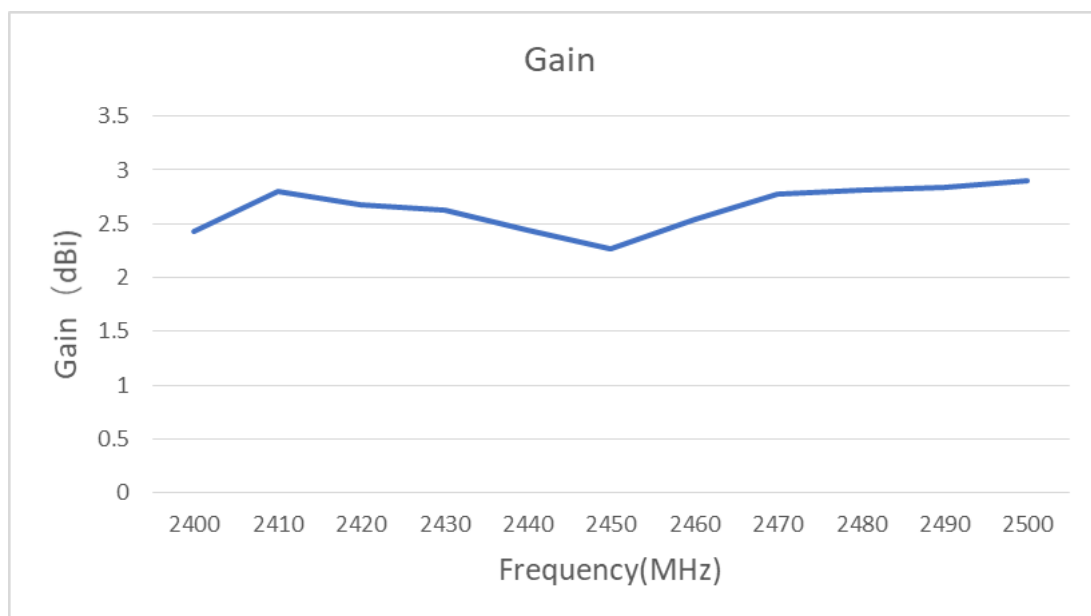
Data list

Freq	2.4GHz	2.45GHz	2.5GHz
VSWR	1.52	1.23	1.47

TESTING CURVE

2. Passive testing

2.1 Efficiency and Gain



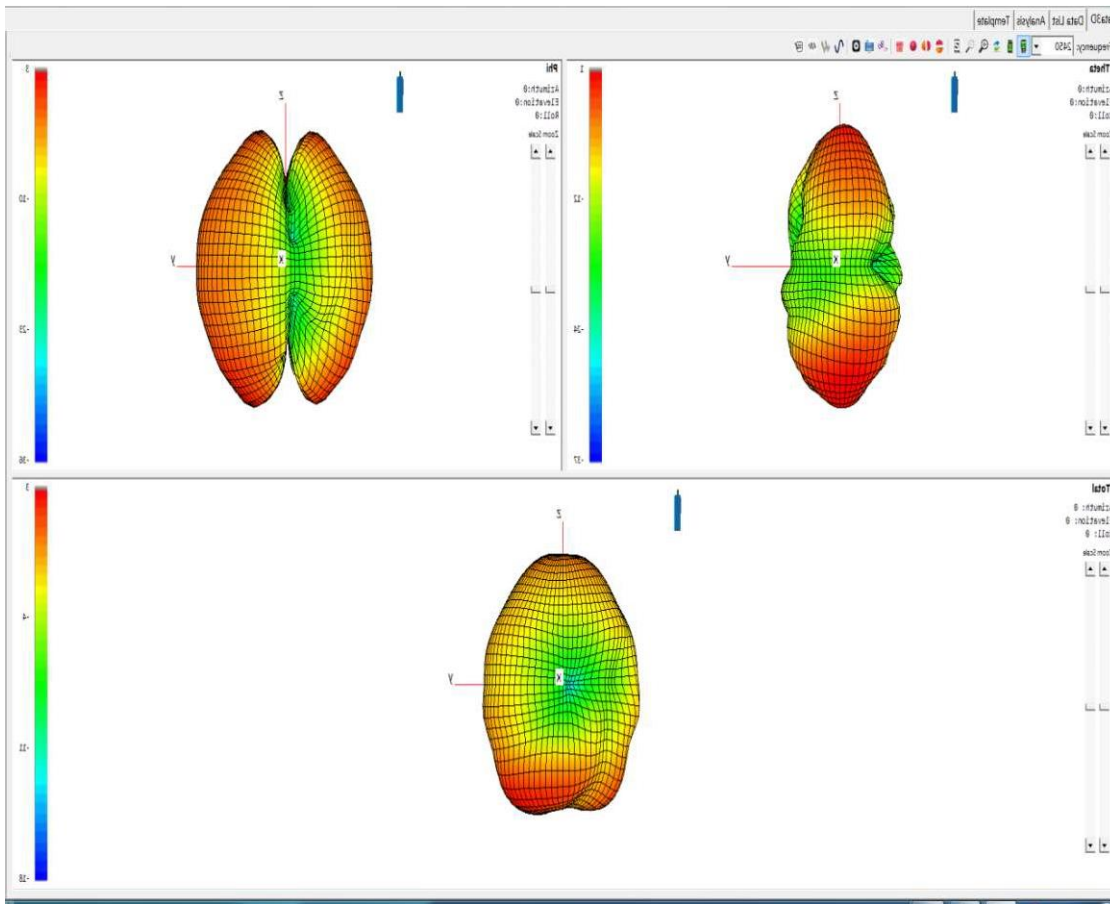
TEST DATA

Efficiency and Gain Data list

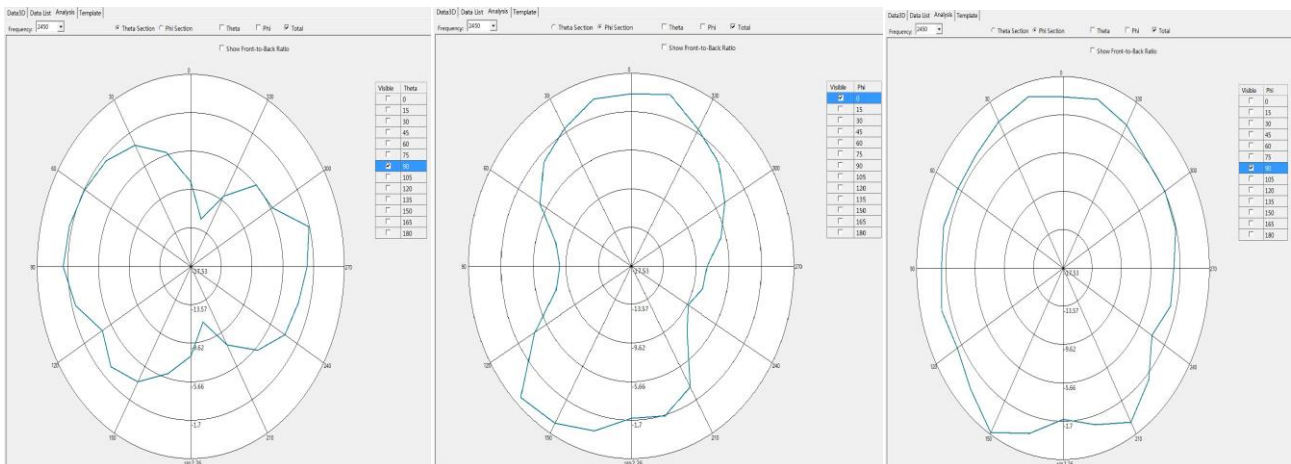
Freq	Gain	Efficiency
2400	2.43	61.81
2410	2.80	67.31
2420	2.68	67.79
2430	2.63	66.72
2440	2.44	64.60
2450	2.26	63.60
2460	2.54	66.24
2470	2.77	69.69
2480	2.81	69.96
2490	2.84	69.81
2500	2.90	70.51

TEST CURVE

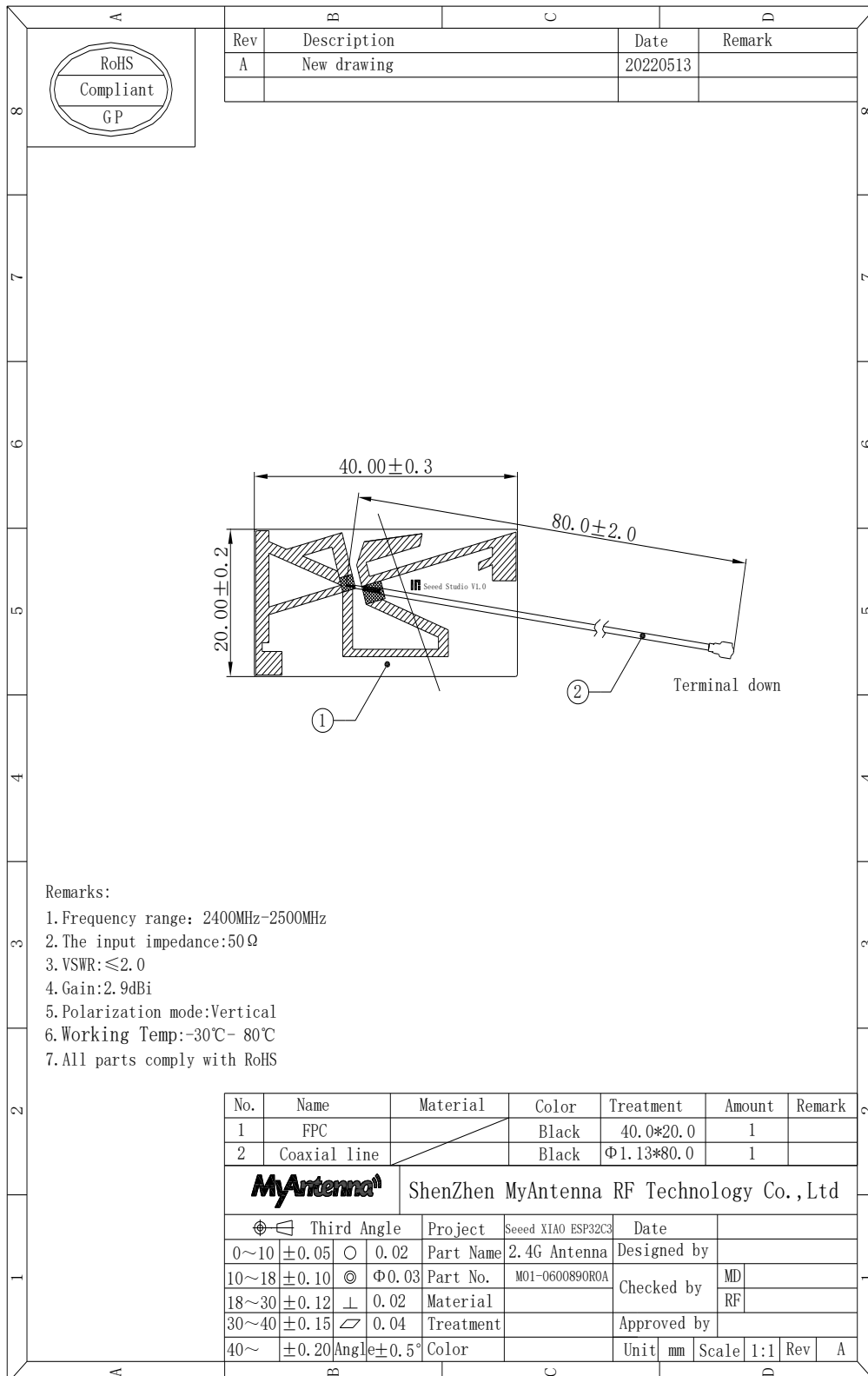
2.2 3D Map



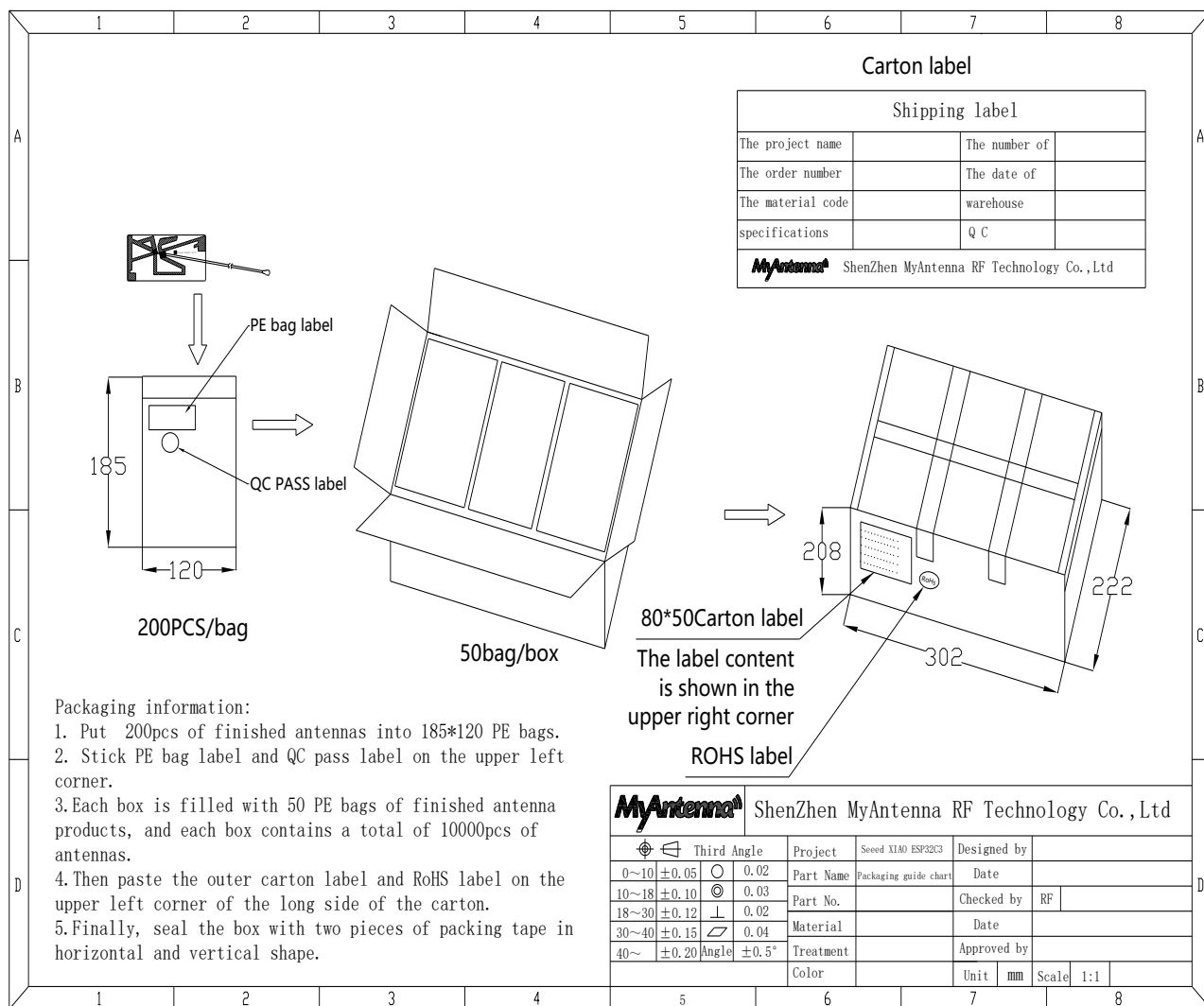
2.3 2D Figure



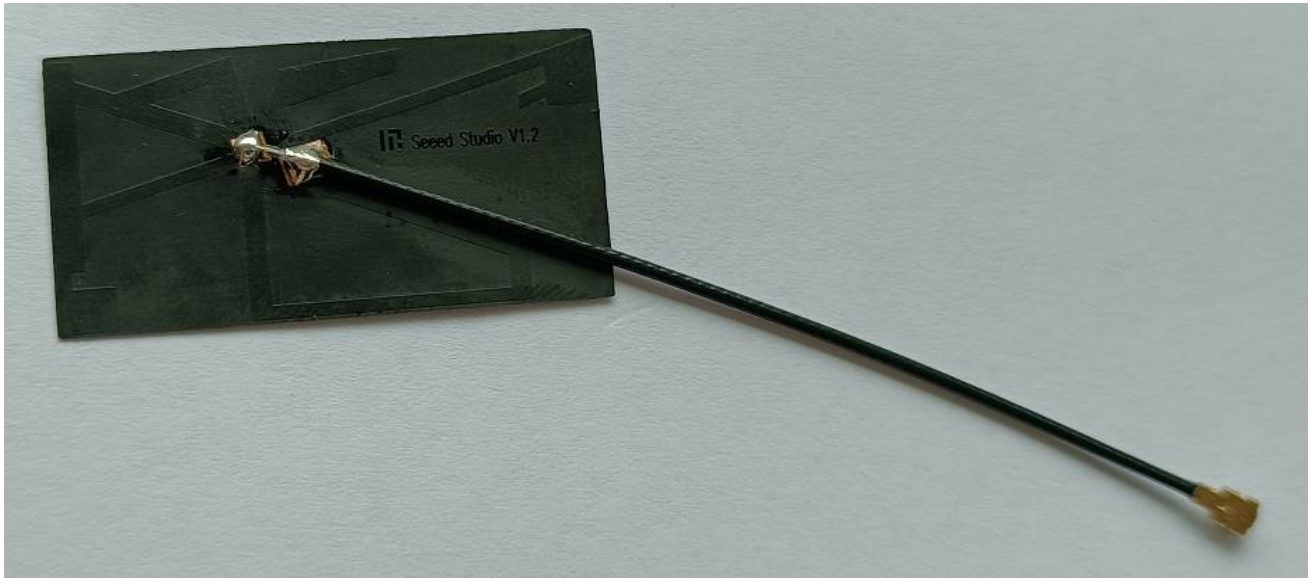
Engineering Drawing



Packing Drawing




Antenna physical diagram



Inspection Report

Project Name		Seeed XIAO ESP32C3		Antenna Type	Seeed XIAO ESP32C3 2.4 Antenna	Inspection Date	2022-06-13		
Appearance Standard				1、No abnormality on the antenna surface					
Dimension Standard				2、Within the required tolerances based on the drawing					
No.	Inspection subject	Standard	Inspection tool	Sampling number	Result	Remark			
1	Appearance	As Above	Visually	3	OK				
2	Dimension	As Below Chart	Vernier Caliper	3	OK				
No.	Inspection Subject	Dimension	Tool	Test Results (Recorded six groups of testing data includes the highest & lowest values)					
				1	2	3	4	5	6
1	Dimension	40±0.3	Caliper	40.07	40.09	40.02			
2		80±2.0		80.9	80.5	80.4			
3		20±0.2		20.06	20.09	20.05			
4									
5									
Remark									
Approved : SAM			Checked: Chen			Inspector: Dong			

 QC engineering drawing			The file number	MA-QCW-2206-006	The file name	2.4G external rod antenna			Compile	zhao
			version	A					Audit	
			The release date	2022-06-11	Effective date	2022-06-11	The page number	1/2	Approval	xu
The serial number	process	The name of the process	Make technical parameters/quality characteristics	Use equipment fixture	Testing equipment	Check the method	Check the frequency	Using the record	undertaker	The relevant documents
1		Incoming inspection	Inspection standards/drawings	caliper	/	visual	AQL sampling	IQC inspection report	IQC	
2		Production of picking	Production task list	/	/	/	/	Material requisition	Warehouse operator	
3		Unpacking confirm quantity	Delivery note	/	/	/	/	Delivery note	The operator	

4		First appearance confirmation	Sealed samples	/	visual	visual	/	IPQC first inspection record	IPQC	
5		First piece performance test	The product meets the requirements in the design specification	/	Network analyzer	Test visual	/	IPQC first inspection record	IPQC	
6		Soldering FPC	Technical documents/drawings /BOM	/	manual	visual	All inspection	Daily production report	The operator	
7		inspection	IPQC process inspection regulations	/	visual	visual	2H	IPQC process inspection record	IPQC	
8		Test	Technical documents/drawings	/	Network analyzer	Test visual	All inspection	Daily production report	The operator	
9		Packing (bag) quantity confirmation	Drawing/BOM	/	/	visual	All inspection	Daily production report	The operator	
10		inspection	IPQC process inspection regulations	/	visual	visual	2H	IPQC process inspection record	IPQC	
11		Put in storage	Production task list	/	/	/	/	Warehouse receipt of products	Warehouse operator	

12		Pre-shipment inspection	Shipping note	Network analyzer	measurement	AQL sampling	/	OQC	
instructions: <input type="checkbox"/> Said operation、 processing; handling <input checked="" type="checkbox"/> It means confirm, check, judge, approve <input type="checkbox"/> Put into storage; Said									
mark	Modify the content			version	The date of	modifier	The examination and approval		

ROHS TEST REPORT

Project material name	material code	Report the name of the test sample	testing or ganization	testing time	Test report number	<u>test conclusion</u>	remark
Seeed XIAO ESP32C3 ANTENNA	M01-0600890R0A	FPC(base material)	SGS	2022/2/21	SHAEC2202460503	OK	
		FPC(ink)	SGS	2021/9/6	ETR21805816	OK	
		FPC (adhesive)	SGS	2021/9/4	SHAEC2118730101	OK	
		Tinned copper)	SGS	2021/8/23	CANEC2114861409	OK	
		FEP	SGS	2021/12/9	CANEC2122693209	OK	
Prepared: Dong		Checked: Chen		Date: 2022.06.13		Stamp service:	

RODUCT VERIFICATION

Test items	Test description / test standard	Objective requirements	Product validation (PV)							Remarks
			Sample		Test location			Test	Person liable	
			Quantity	Type	cus tom er	Supp ly Merc hant	thir d squar e	third square		
Appearance inspection	The surface shall be free of dents, scratches, cracks, deformation, burrs, mildew and other defects; The surface coating shall not blister, crack or fall off; Metal parts shall not be rusted And other mechanical damage; The pouring material should not overflow.	Normal appearance	Full inspection	Tooling parts		√		OK		
Dimensions	According to the drawing dimensions	Within dimensional tolerance	3pcs	Tooling parts		√		OK		
Performance check	The product meets the requirements in the design specification	Short circuit and ontinuity test	Full inspection	Tooling parts		√		OK		
Salt fog resistance	48 hour salt spray test	No rust on the surface after cyclic verification	3pcs	/		√		OK		

Requirements for prohibited and restricted substances	Test as required by RoHS	The product shall comply with ROHS standard	/	/		√		OK		
Packaging specification	Place according to the requirements of drawings and specifications	Visual inspection and placement as required	Full inspection	Tooling parts			√	OK		

