



INCX

睿生光電股份有限公司

Document No.: APS-22-8-056

Approval Sheet Rev.: A

Spec. Rev. : A

APPROVAL SHEET

Product Model No. / 產品品名 : PC143.54.0515A

Customer No. / 客戶料號 : _____

Issue Date / 發行日期 : 2022 / 03 / 03

Approved Date / 承認日期 : _____

Approved by customer: (signing or stamping here)



TAOGLAS®

Datasheet

[InnoCare™ PCB Dual-band 2.4/5.8 GHz Antenna]

Part No:
[PC143.54.0515A]

Description

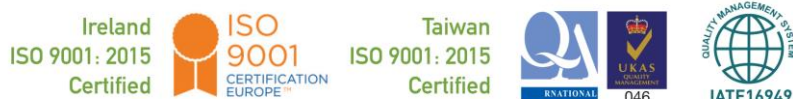
[2.4/5.8GHz PCB Antenna 515mm 1.13 black cable IPEX MHF4L]

Features:

Customized antenna
2.4/ 5.8GHz Dual Bands for WiFi Antenna.
Dims: 70.0mm * 9.6mm * 1.0mm
515mm O.D 1.13mm coaxial cable with I-PEX MHF4L(M) connectors
Custom Cables and Connectors Available
RoHS & Reach Compliant

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Specification

WIFI		
Frequency (MHz)	2.4GHz	5.8GHz
	2400-2500	5150-5825
Efficiency (%)		
PC143.54.0515A	1.9	12.6
Average Gain (dB)		
PC143.54.0515A	-17.16	-8.98
Peak Gain (dBi)		
PC143.54.0515A	-11.01	-1.62
Impedance	50 Ω	
Polarization	Linear	
Radiation Pattern	Omni	
Input power	5 W	

Mechanical	
Dimensions (mm)	70.0 x 9.6 x 1.0
Weight (g)	3.0
Material	FR-4
Connector	IPEX MHF4L(M)
Cable	Black_515mm_φ 1.13 (mm) coaxial cable
Environmental	
Temperature Range	-40°C to 85°C
Humidity	Non-condensing 65°C 95% RH

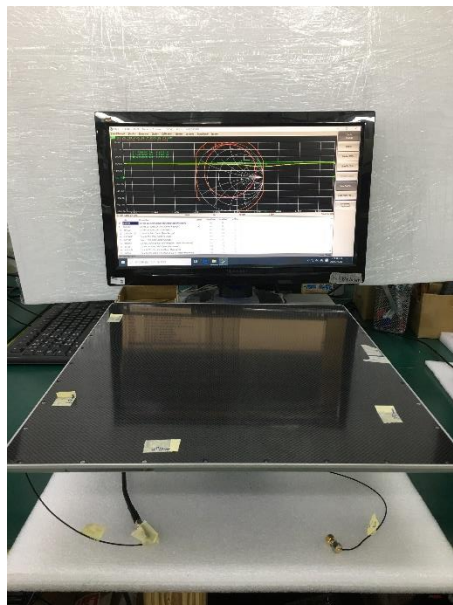
Test Setup

S11 / VSWR / Return Loss

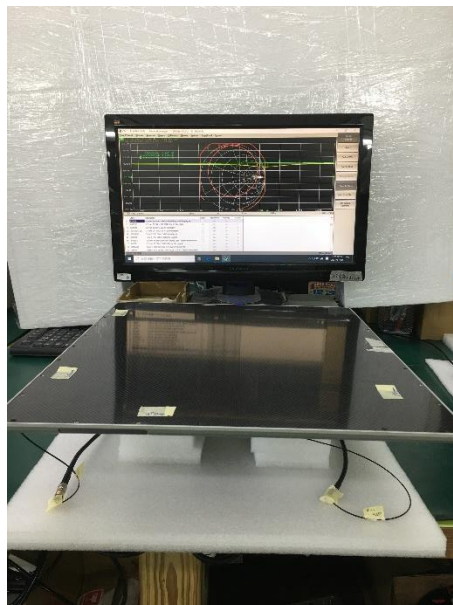
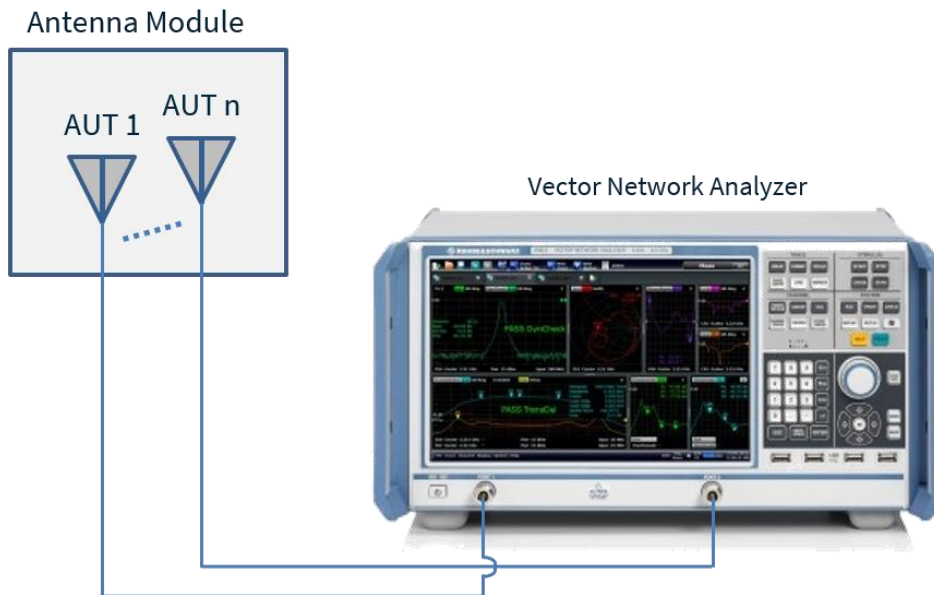
AUT



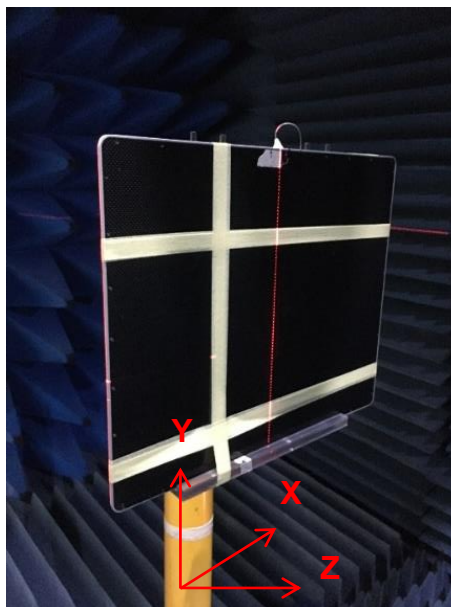
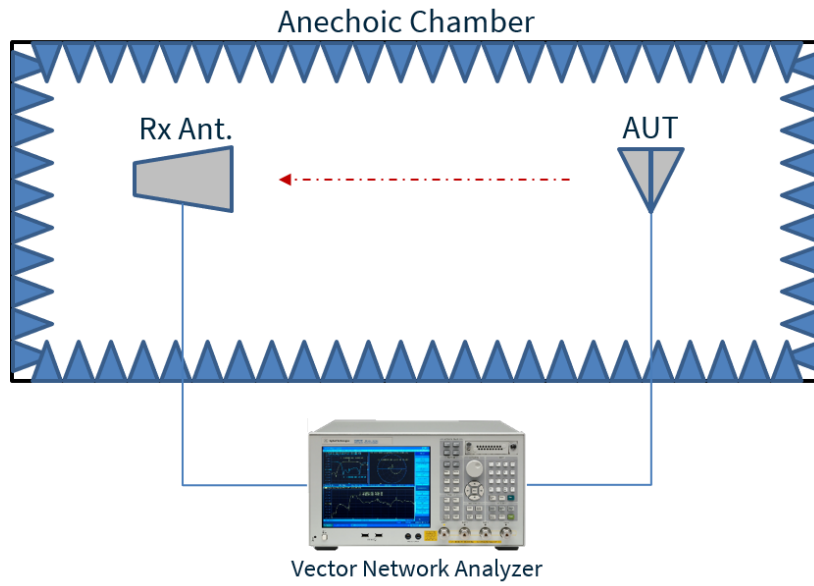
Vector Network Analyzer



S12 / Isolation

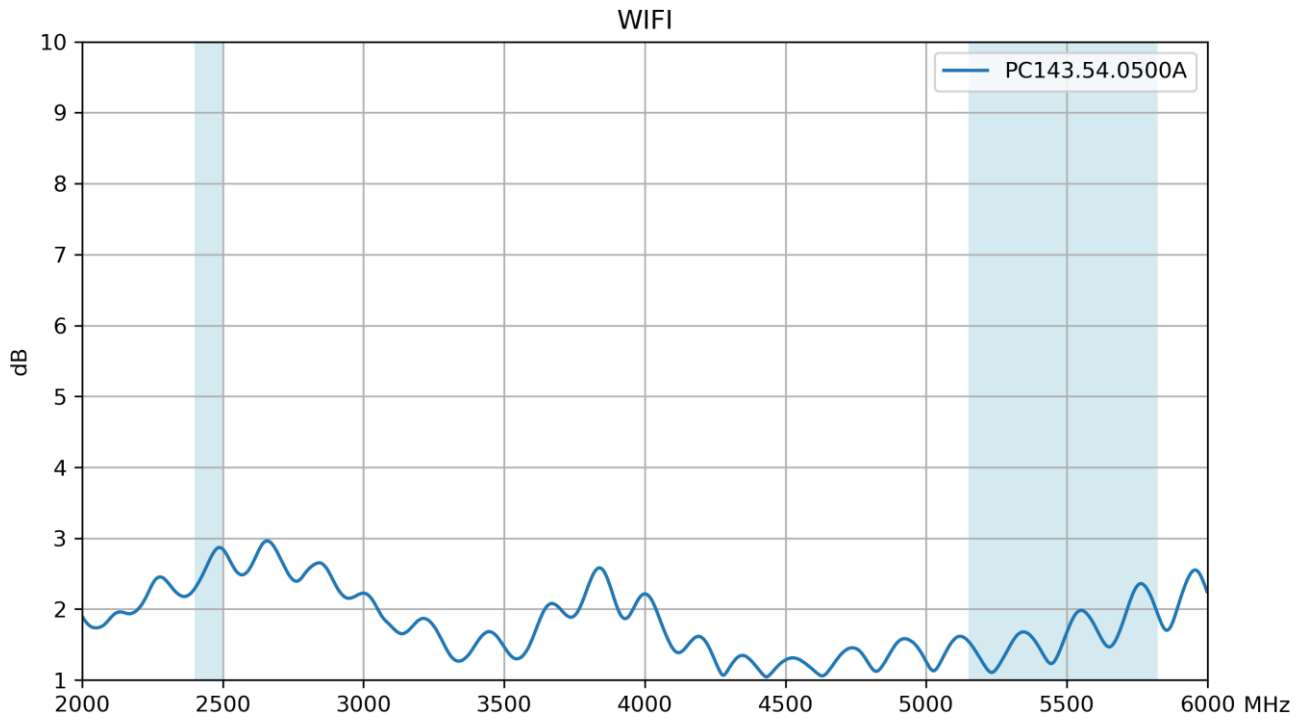


Radiation Performance

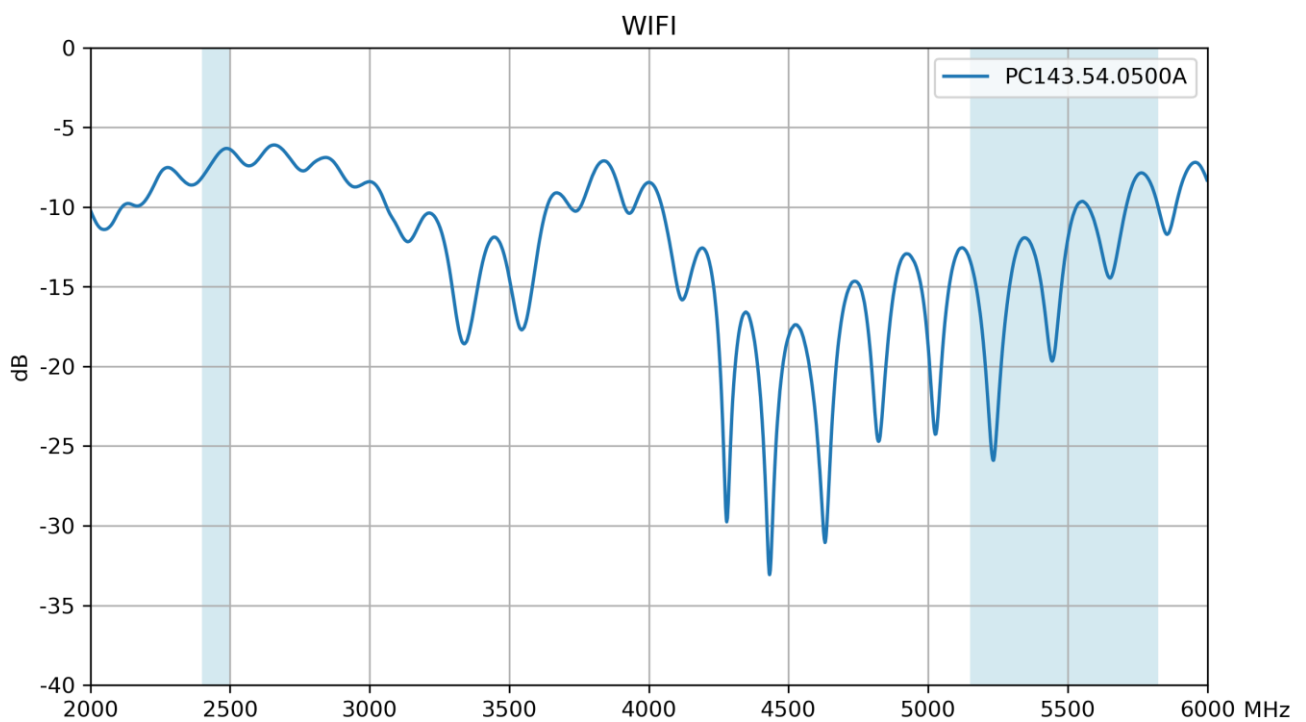


Antenna Characteristics

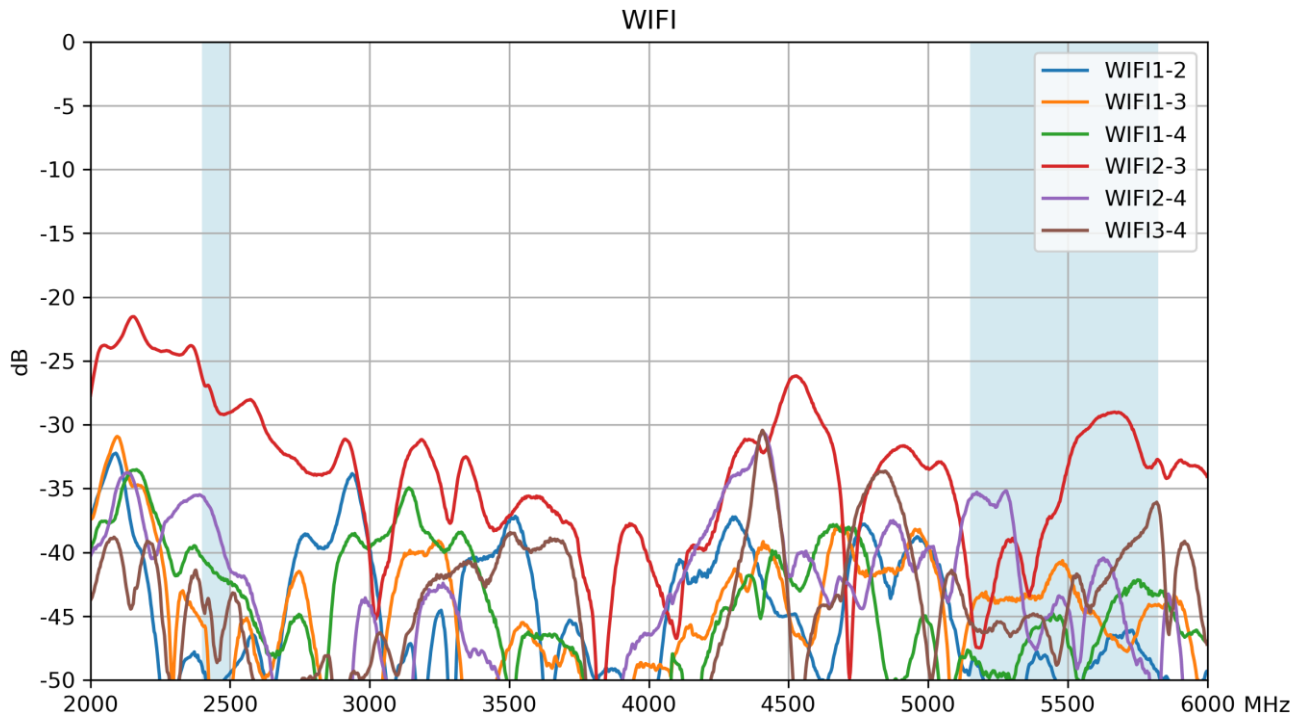
VSWR



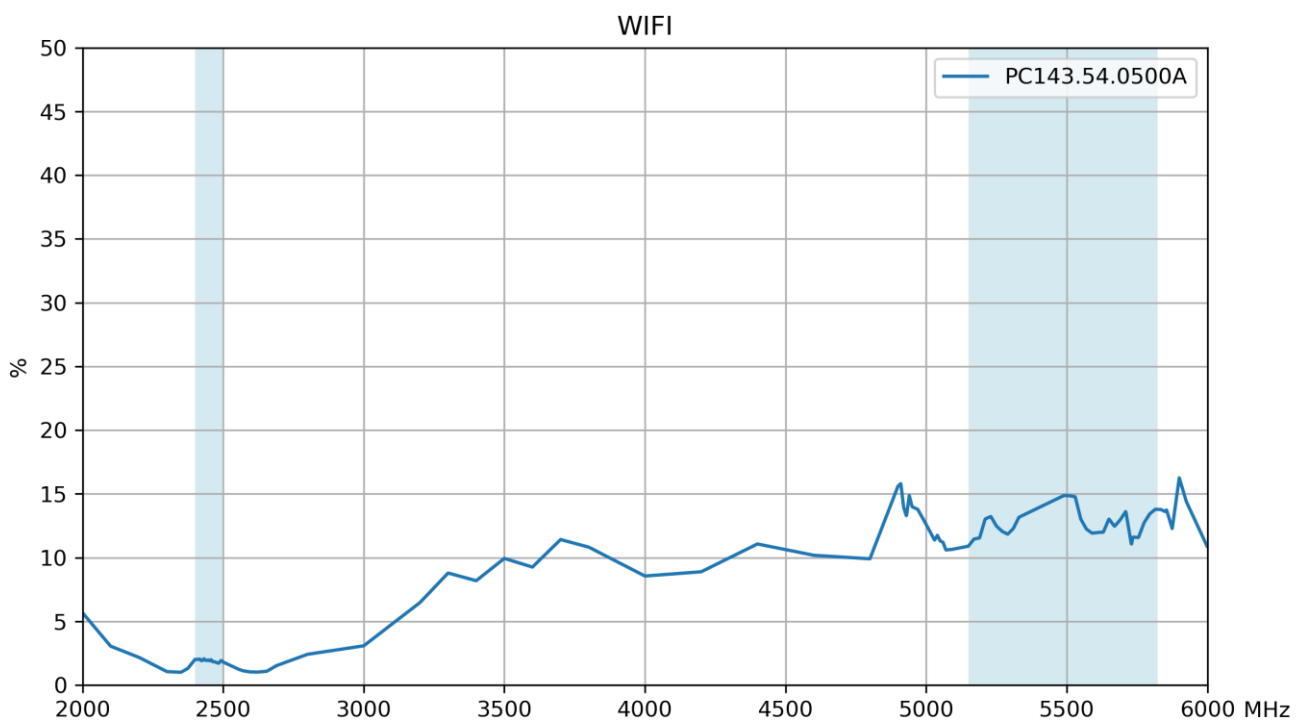
Return Loss



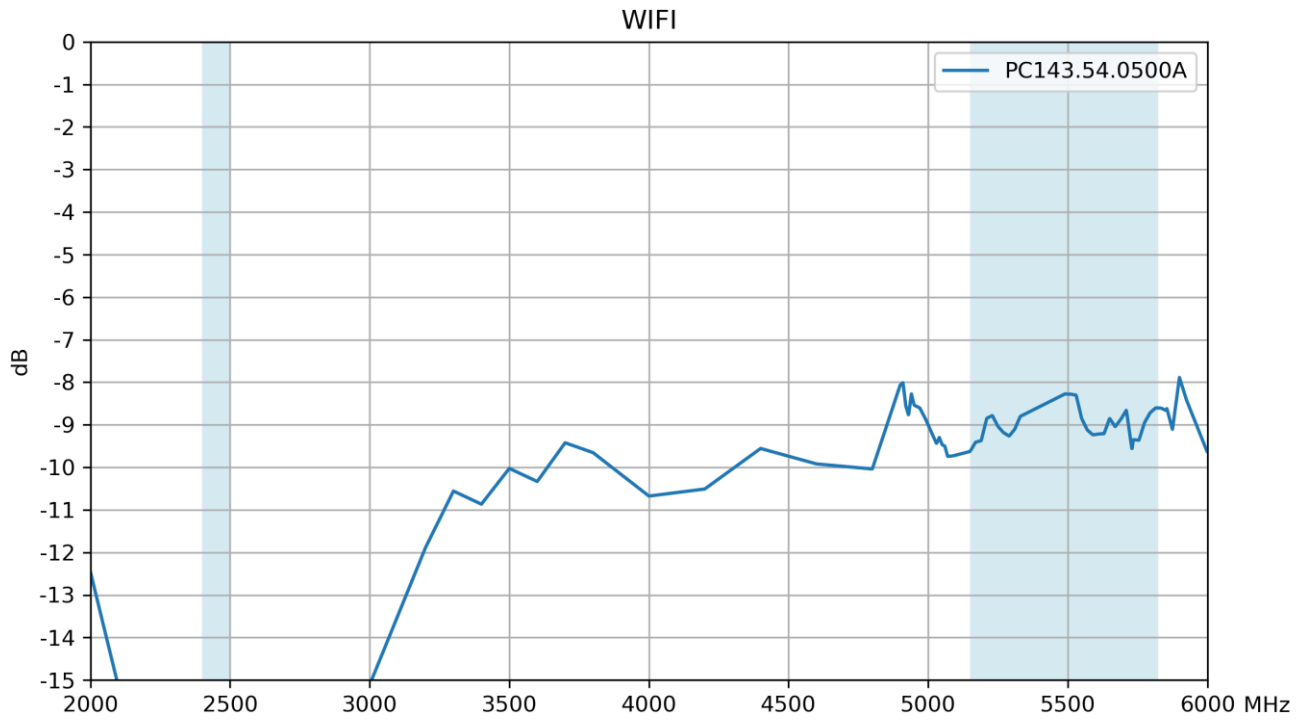
Isolation



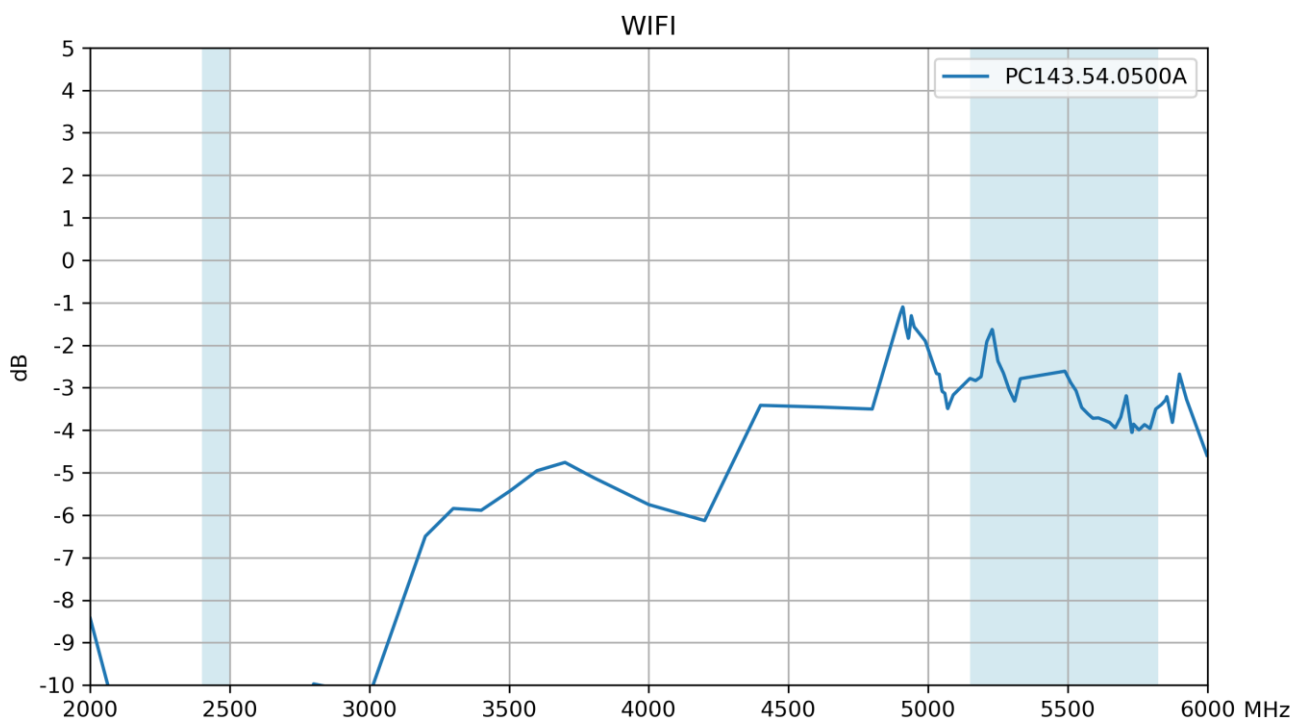
Efficiency



Average Gain



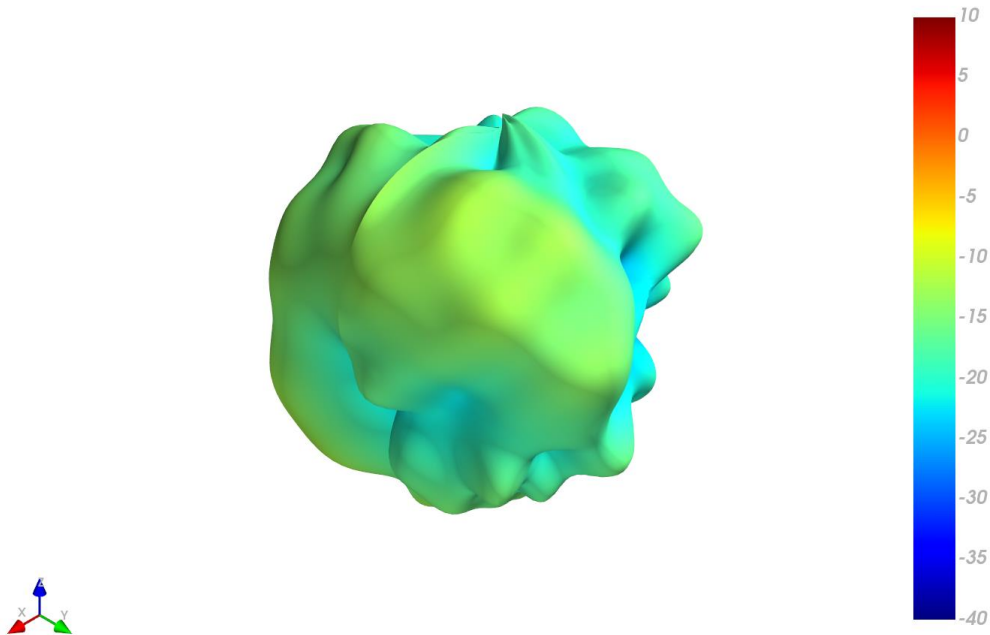
Peak Gain



Radiation Patterns

WIFI PC143.54.0500A 3D and 2D Radiation Patterns

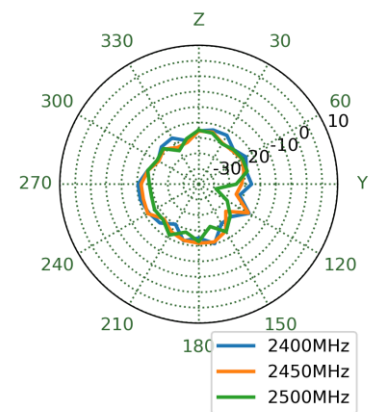
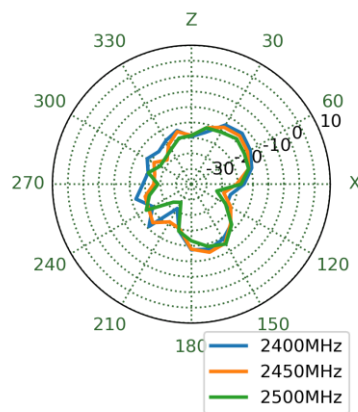
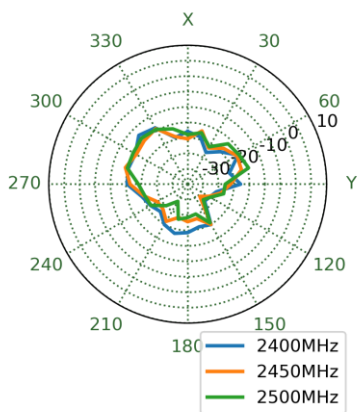
Gain total, 2450MHz



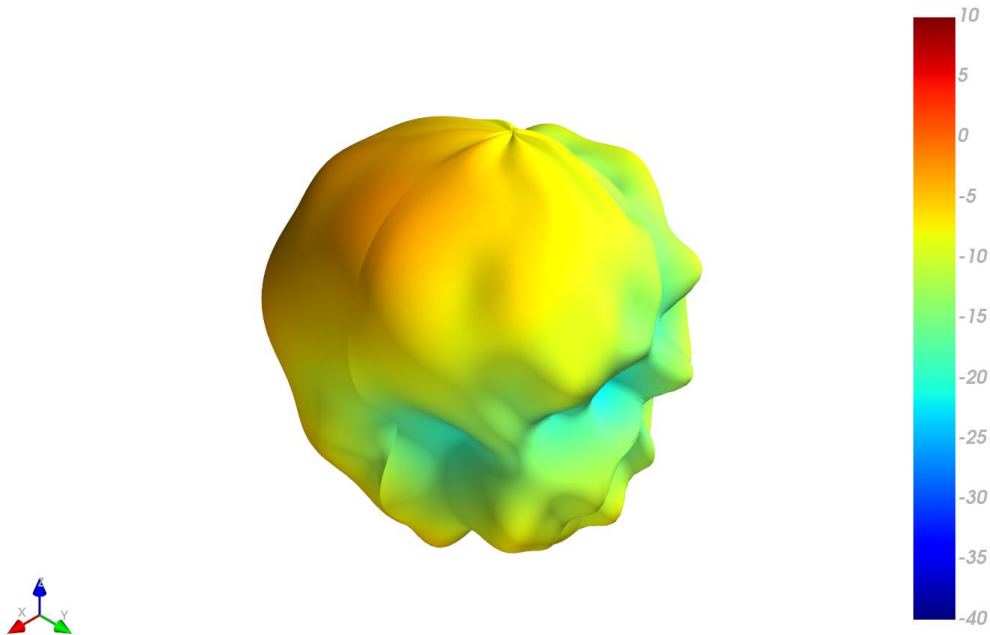
XY Plane

XZ Plane

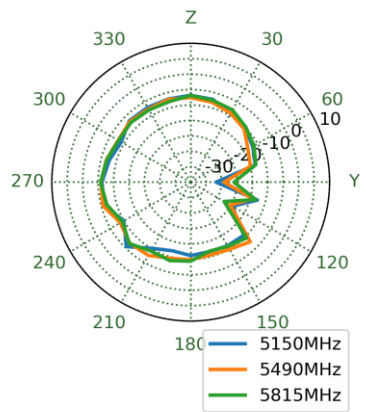
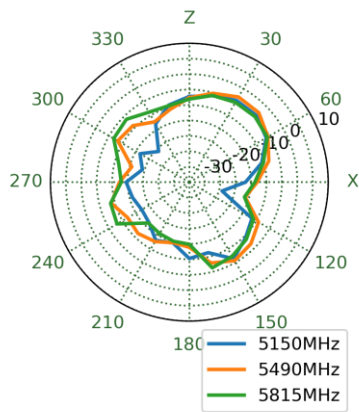
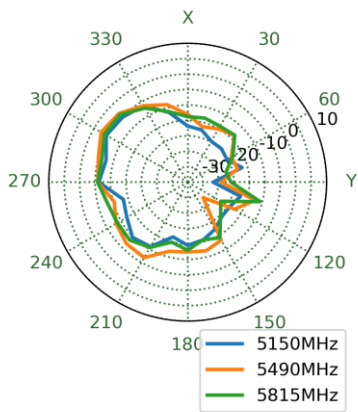
YZ Plane



Gain total, 5490MHz



XY Plane XZ Plane YZ Plane



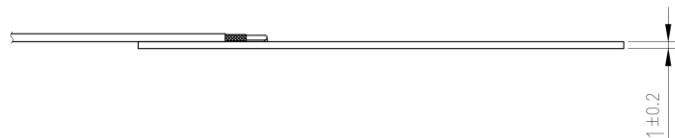
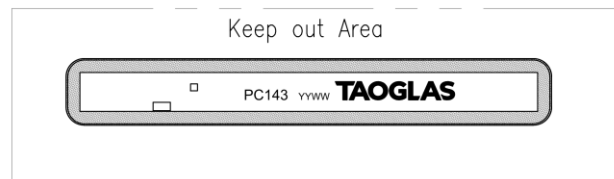
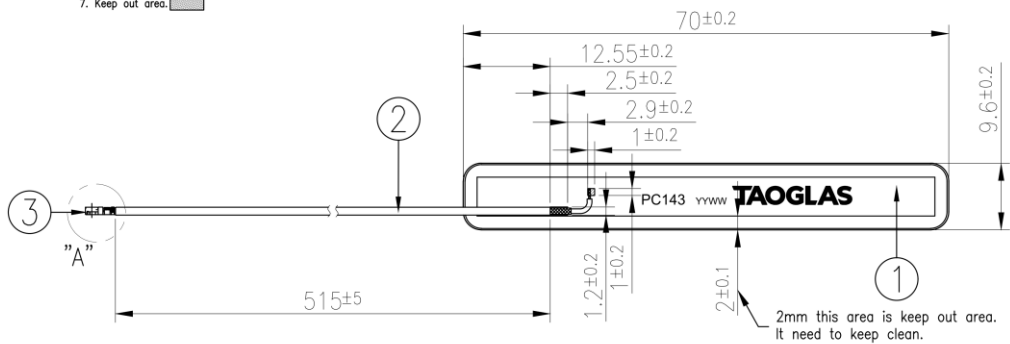
Mechanical Drawing

ISO NO.: EDW-22-8-0099

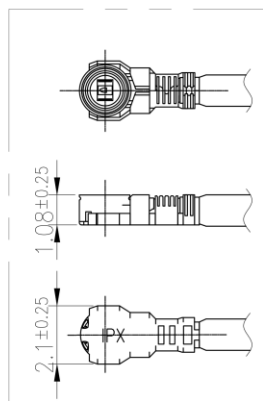
STATE: Release

- NOTES:
- No dross or insufficient soldering. Solder thickness 0.3 ~1.7mm.
 - The solder must be smooth and full to the edges of the pad.
 - The solder must not extend outside of the pad area.
 - The connector position has special orientation to the PCB as per drawing.
 - All material must be RoHS compliant.
 - Open/short QC, VSWR required.
 - Soldered area:
 - Keep out area:

REV.	DESCRIPTION	ENG.	APPROVED	DATE
001	Initial Design	Ruby	Aaron	2022/02/15



IPEX MHF4L

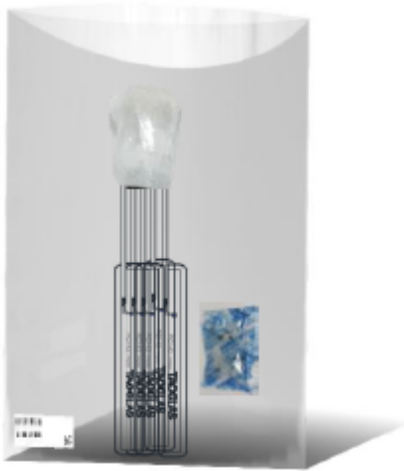


Detail A
Scale:4:1

	Name	Material	Finish	QTY
1	PC143 PCB	Composite 1.0I	Black	1
2	1.13 Coaxial Cable	FEP	Black	1
3	IPEX MHF4L	Copper Alloy	Au/Ni Plated	1

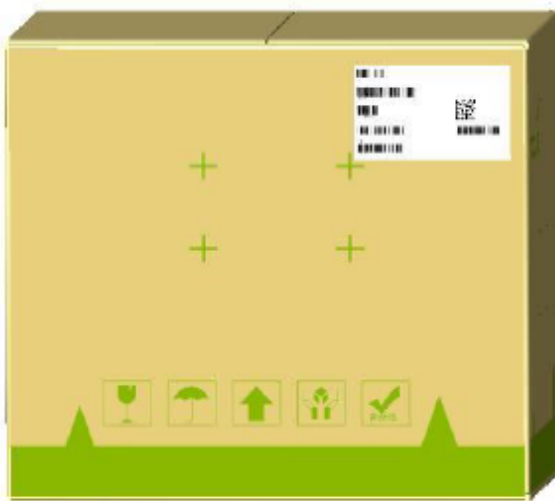
APPROVED BY: Aaron	<p>TAOGLAS. TW Design Centre This drawing and its inherent design concepts are property of Taoglas. Not to be copied or given to third parties without the written consent of Taoglas.</p>
CHECK BY: Aaron	
DRAWN BY: Ruby	
DATE: 2022/02/15	TITLE : 2.4/5GHz PCB Antenna 515mm 1.13 black cable IPEX MHF4L
<small>UNLESS OTHERWISE SPECIFIED TOLERANCES ON:</small> XX±0.5 X±0.3 X±0.2 XX±0.1 XXX±0.05	PART NO. : PC143.54.0515A
THIRD ANGLE PROJECTION	UNIT: mm SCALE: 1:25:1 PAGES: 1/1 REV. D01

Packaging



- 100 PCS/ Vacuum PE bag
- 100 PCS / Bubble cloth
- tape
- 1 PCS / 3g Desiccant
- SPQ Label

(Based on the number of finished products)



- 2000 PCS / Carton
- Carton(mm): 320x250x230
- Carton Label



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