



Ultra-Wide Band FPC Antenna

SZK-C-2U05

UWB Channels 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15: 3.0 – 10.5GHz

Description

LUPI, ultra-small form factor for Ultra-Wide-Band applications. LUPI was developed to be compact but still cover the frequency range of **3.0 – 10.5GHz**.

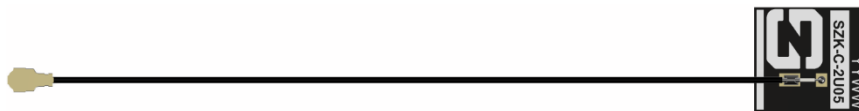
- For European and USA Ultra-Wide Band applications
- UWB Channels 1 to 15
- Small form factor of 14.0 x 13.0 x 0.2 (mm).
- Alternate cable lengths and connectors available upon request, contact sales@synzen.com.tw

Applications

Automotive
Tracking

Precision Surveying
Entertainment Devices

Smart home
Sensors





General Specifications

Mechanical Specifications

Part Number	SZK-C-2U05
Name	LUPI
Dimensions	14.0 x 13.0 x 0.20 (mm)
Weight	<0.5g
Antenna Type	FPC Self-Adhesive
Cable Length	100mm
Cable type	Mini Coax \varnothing 1.13mm
Connector	MHFI (U. FL Compatible)
Adhesive backing	3M 468

RF Specifications

4G LTE/NB-IoT Bands	Frequency Range (MHz)	Efficiency (%)	Peak Gain (dBi)	Impedance	Polarization
1,2,3,4	3000-5325	>60	4.30	50 Ω	Linear
5,6,7,8,9,10,11	5990-10500	>65	5.50		

Environmental Specifications

Operational Temperature	-40 to +85 (°C)
Storage Temperature	-10 to +40 (°C)
Relative Humidity	\leq 75%



UWB Channel List

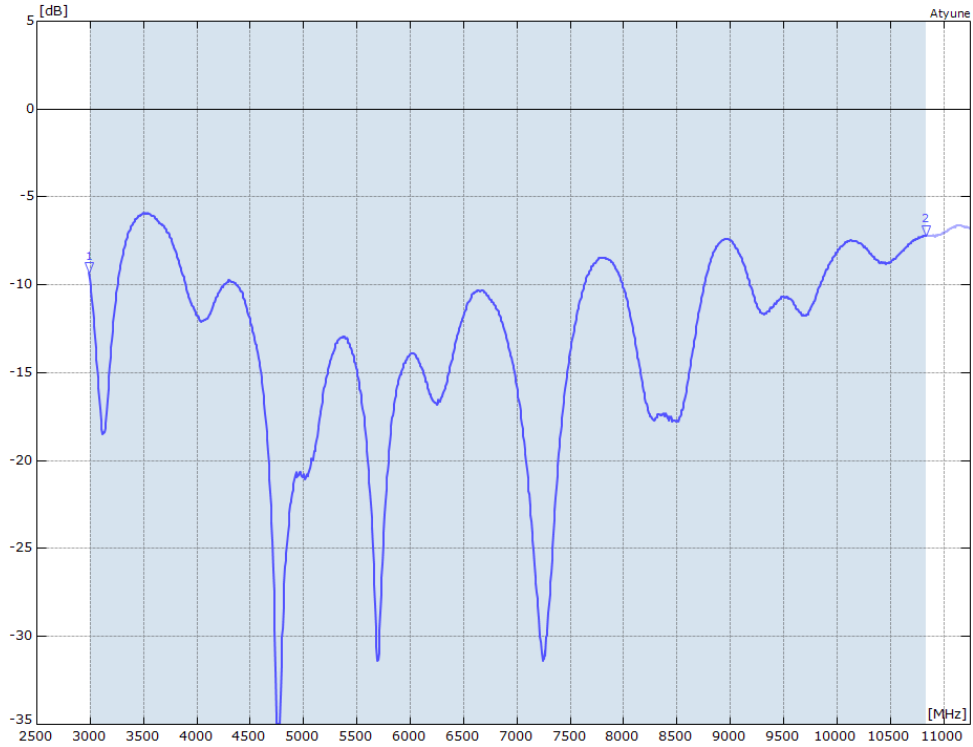
Supported Channels

Channel	Centre Frequency (MHz)	BW (MHz)	Region	Supported
1	3494.4	499.2	USA	Y
2	3993.6	499.2	USA,Europe	Y
3	4492.8	499.2	USA,Europe, Japan, Korea	Y
4	3993.6	1331.2	USA,Europe, Japan, Korea	Y
5	6489.6	499.2	USA,Europe	Y
6	6988.8	499.2	USA,Europe	Y
7	6489.6	1081.6	USA,Europe	Y
8	7488	499.2	USA	Y
9	7987.2	499.2	USA,Europe, Japan, Korea	Y
10	8486.4	499.2	USA,Europe, Japan, Korea	Y
11	7987.2	1331.2	USA,Europe, Japan, Korea	Y
12	8985.6	499.2	USA, Japan, Korea	Y
13	9484.8	499.2	USA, Japan, Korea	Y
14	9984	499.2	USA, Japan, Korea	Y
15	9484.8	1354.97	USA, Japan, Korea	Y

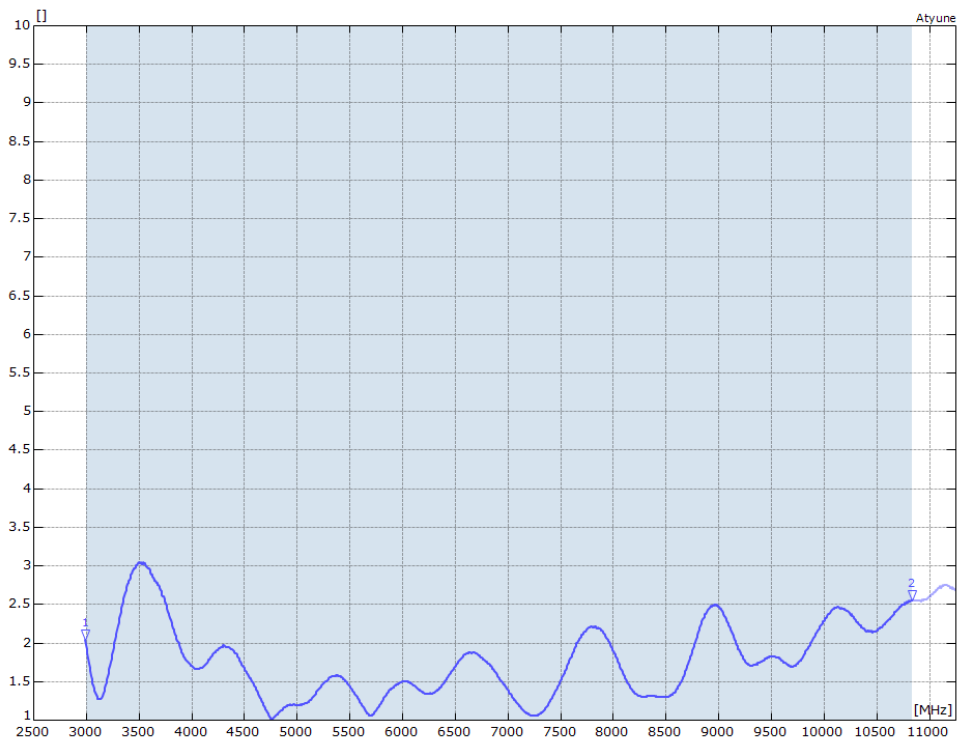


RF Characteristics

S11 Parameter



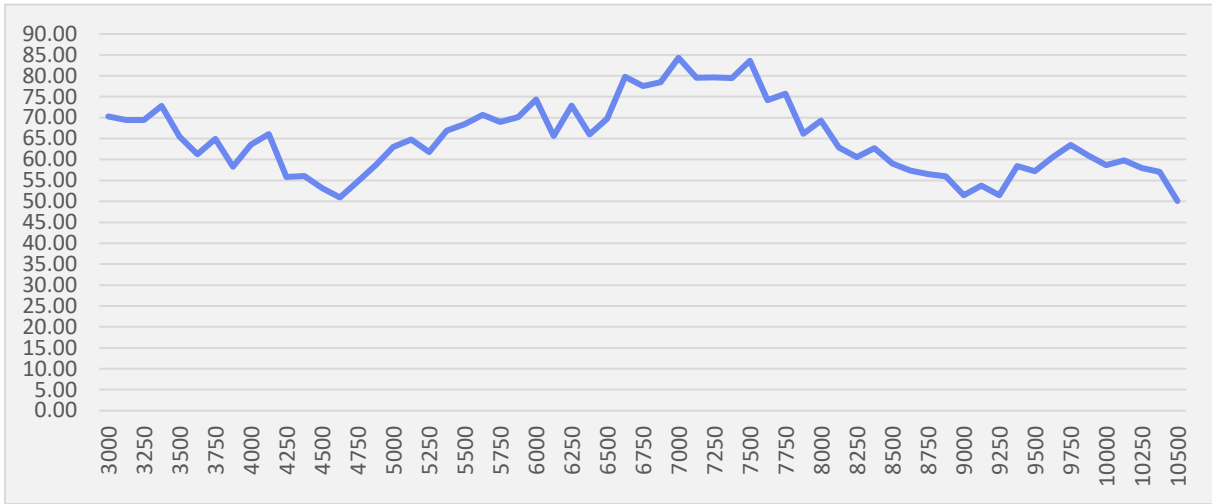
VSWR



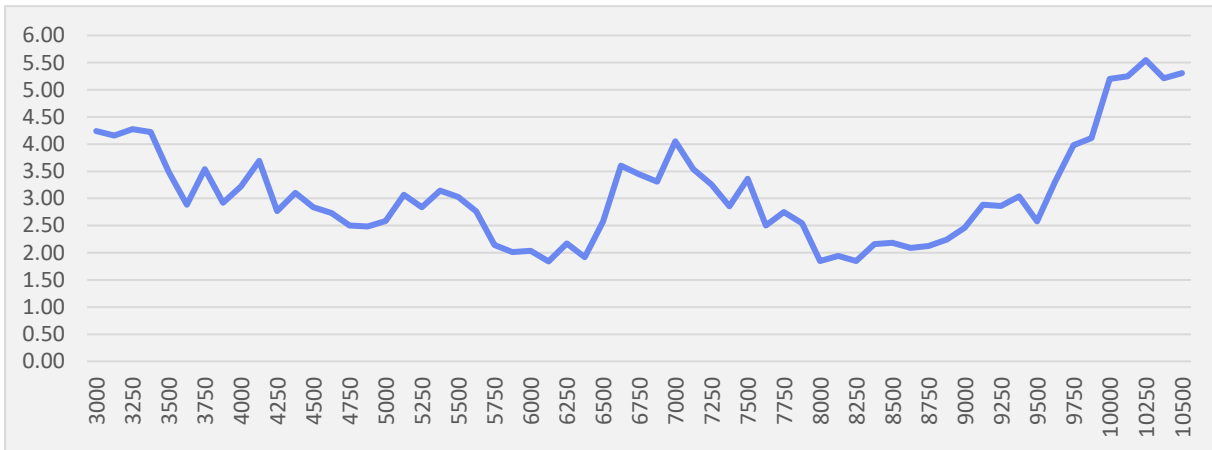


Antenna Performance

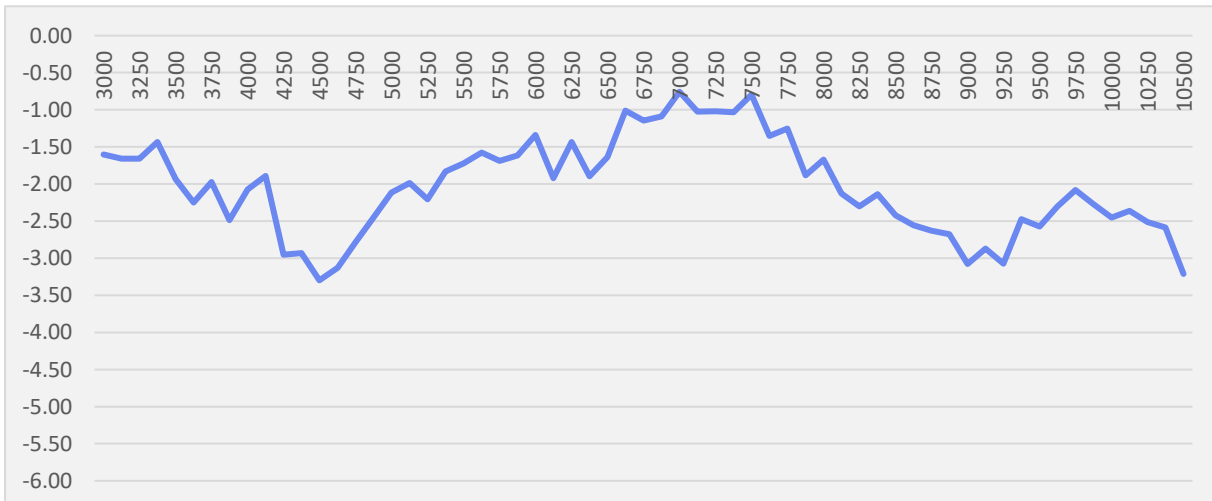
Efficiency



Peak Gain



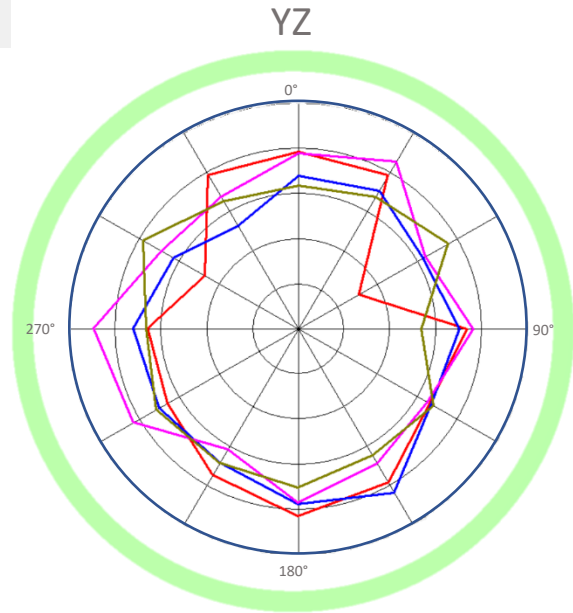
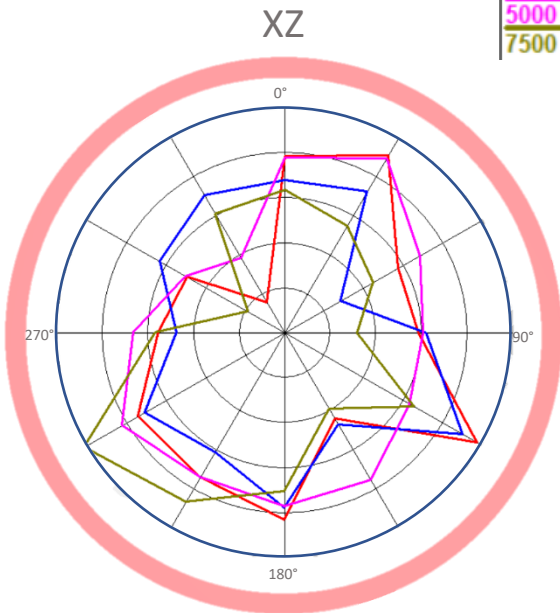
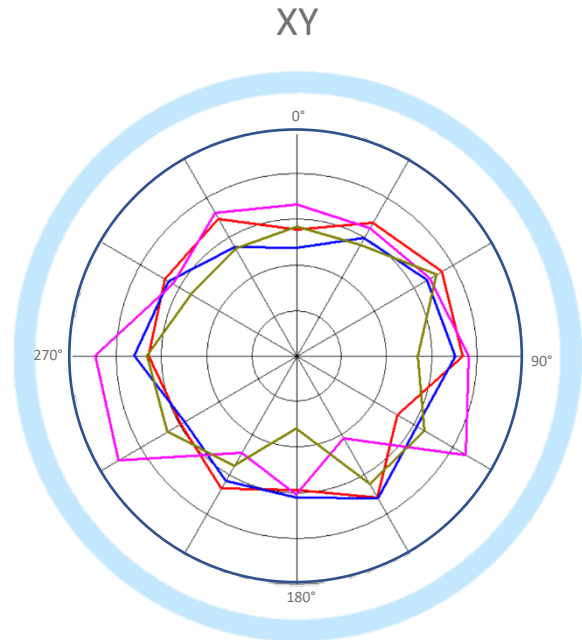
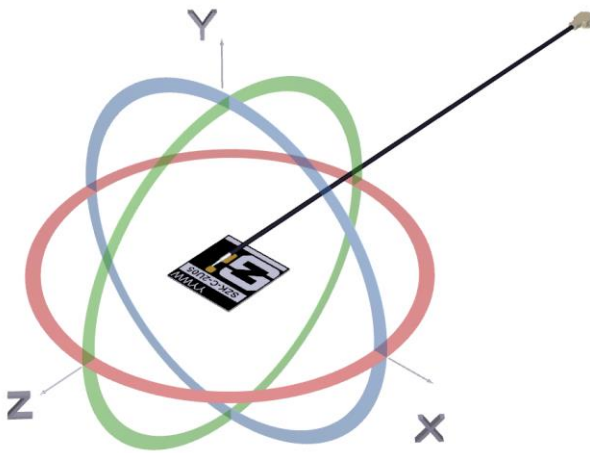
Average Gain





Radiated Performance

2D Polar Plot 3000-10500MHz

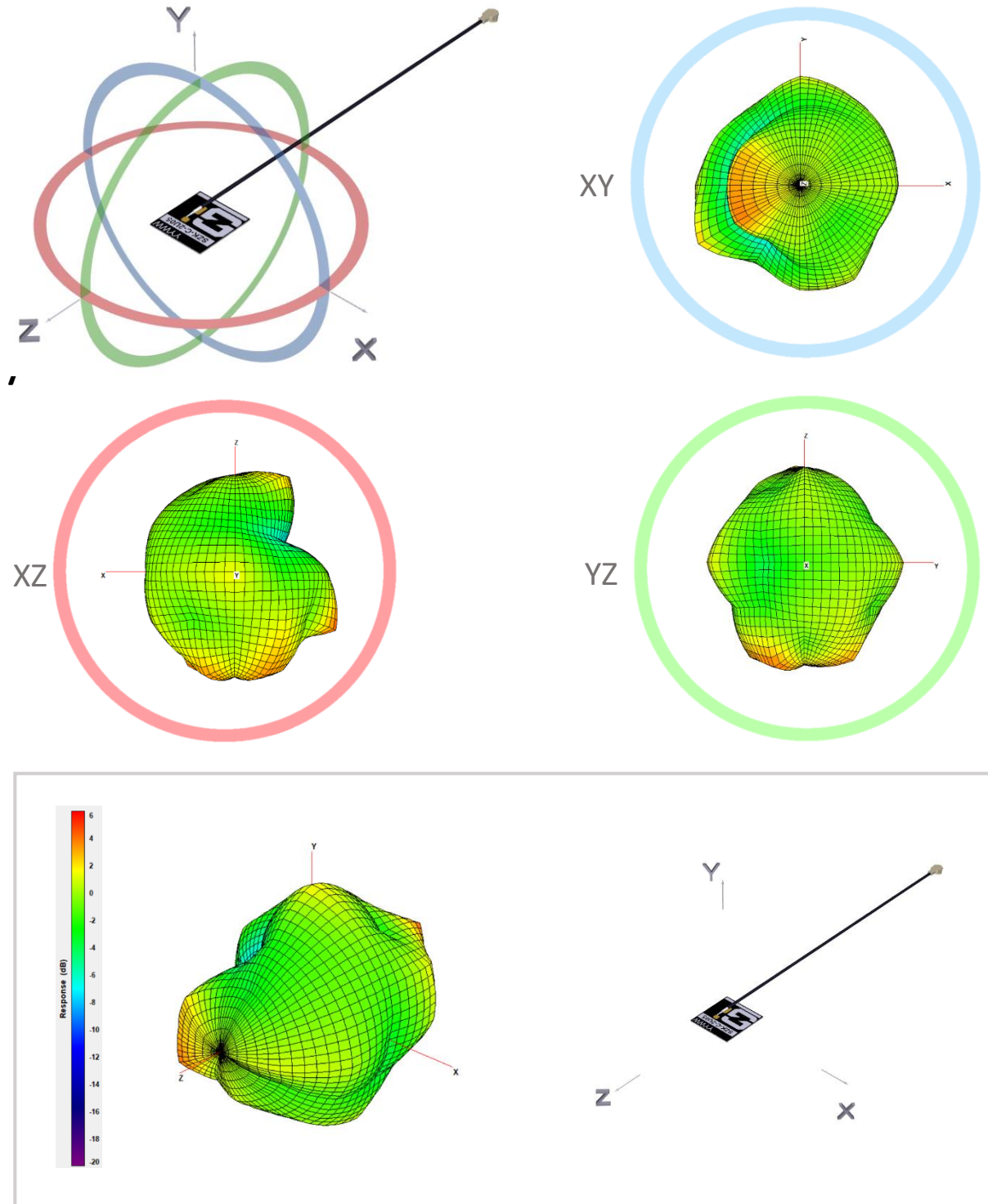




Radiated Performance

3D Radiation Pattern at 4000MHz

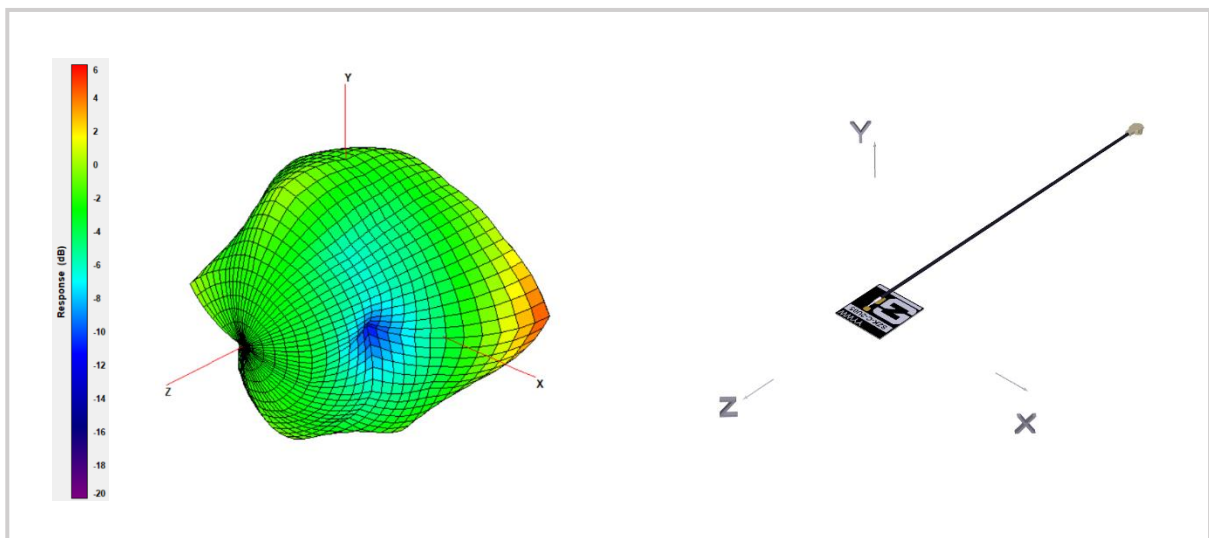
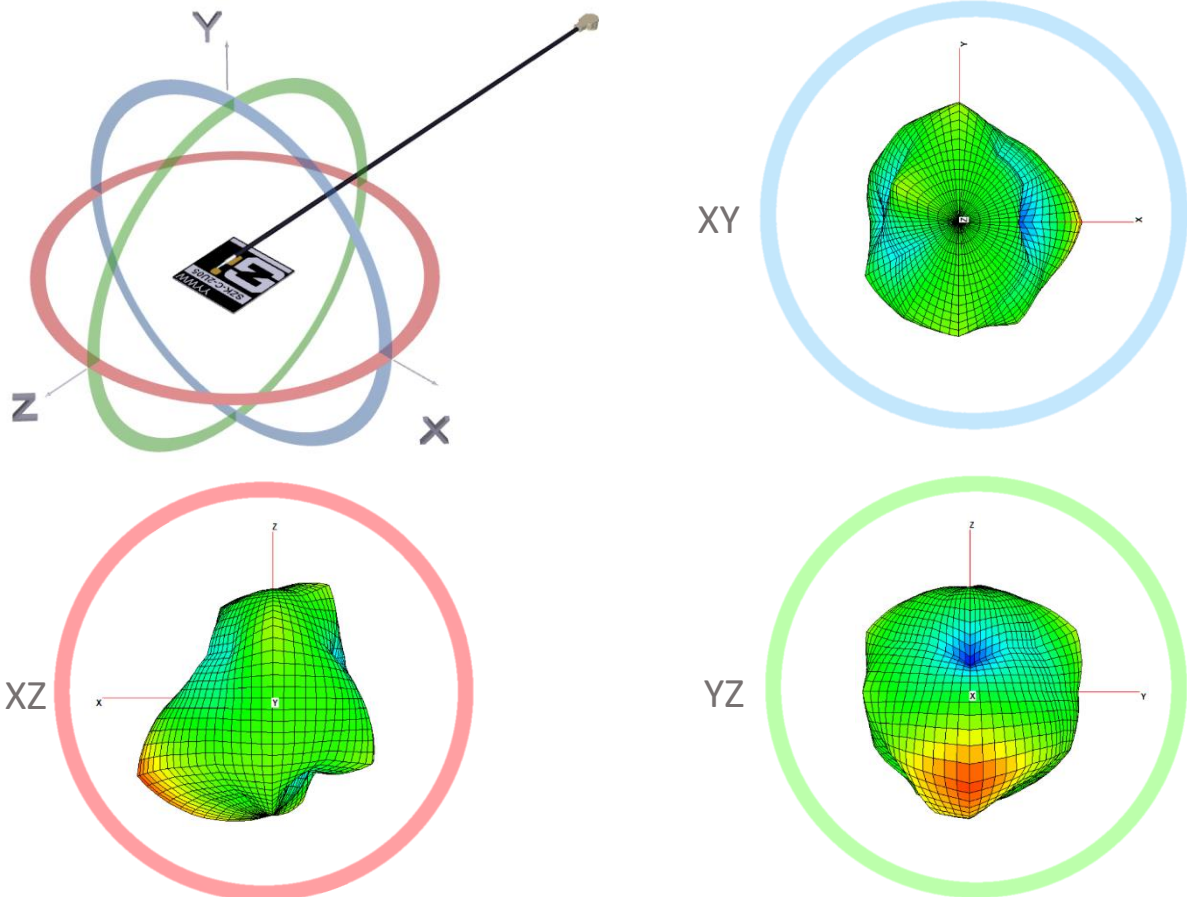
The frequency point shown here is 4000MHz.



Radiated Performance

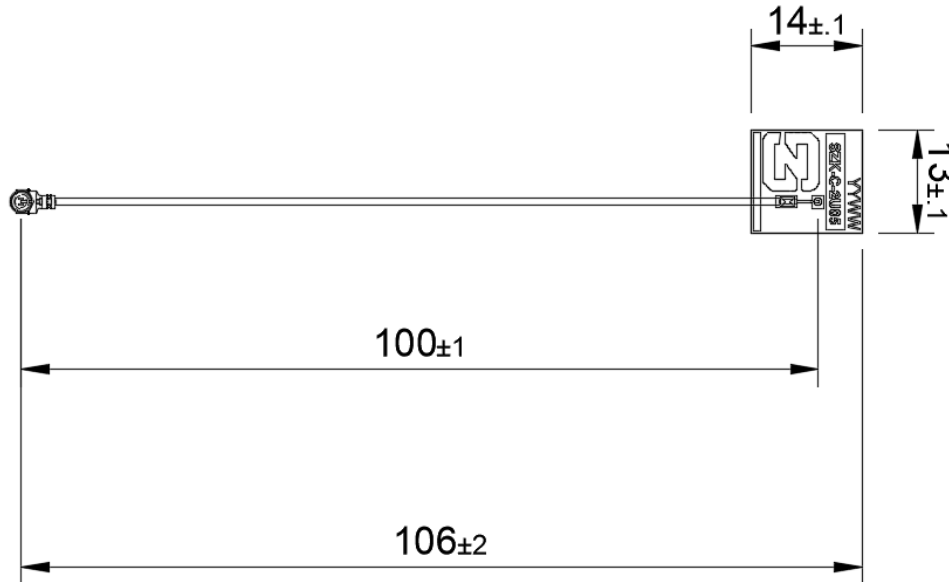
3D Radiation Pattern at 7500MHz

The frequency point shown here is 7500MHz.



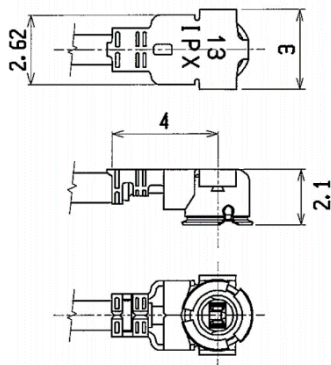
Mechanical

Antenna Mechanical Drawing



All Dimensions in mm

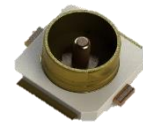
The plug connector on the antenna is an IPEX MHFI.



Suitable PCB mating connector (U.FL) example

Joymax: Model: CT-MPB01X

www.joymax.com.tw



Adhesive Backing

The antenna comes with 3M 468 adhesive backing upon a PI Kapton substrate. An easy peel cut is on the back side for easy cover removal.



Packaging

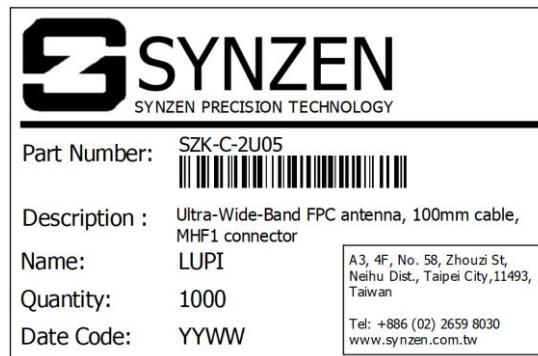
Bag and Packaging Information

Antennas packed in PE bag (20 per bag)

Small bag dimensions: 28.5 x 9.5 (cm)

100pcs per larger PE bag with product label

Bag dimensions = 30 x 19 (cm)



Label

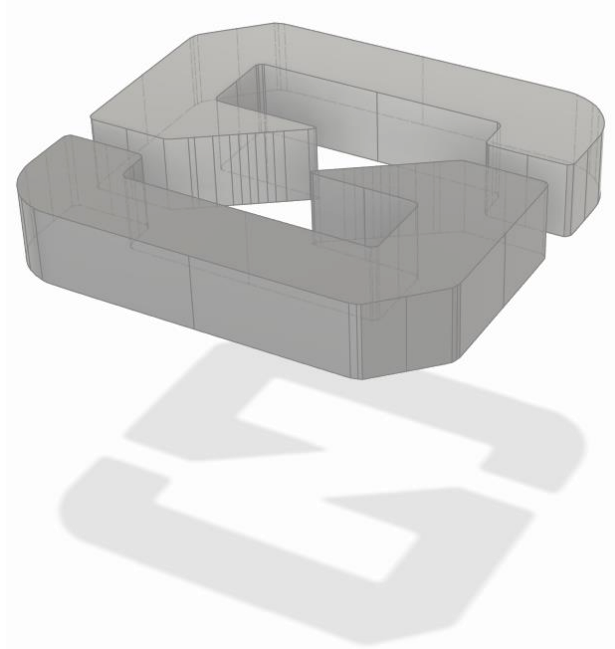
1. 1000pcs per carton
2. Carton dimensions = 33.7 x 32.2 x 10 (cm)



Environmental

Material Regulation

The antenna has been tested to conform to RoHS requirements. A certificate of conformance is available upon request.



Synzen Precision Technology Ltd makes no warranties based on the accuracy or completeness of the contents of this document and reserves the right to make changes to specifications and product descriptions at any time without notice. Synzen reserves all rights to this document and the information contained herein. Reproduction use or disclosure to third parties without express permission is strictly prohibited.