



## DATASHEET

MIRA2 SZK-C-4W28 | FR4 Self-Adhesive Antenna | Tri-band WI-FI

### Features:

WI-FI 6 / 7: 2400-2500; 4900-7125MHz

>2.6dBi Peak Gain, >65% Efficiency

Dimensions: 30.0 x 6.0 x 0.6 mm

Cable Length: 110mm, 0.81mm Ø

Connector: MHF2 (U.FL Compatible)

RoHs compliant

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## Introduction

MIRA2 (SZK-C-4W28) from Synzen is a state-of-the-art, ultra-compact antenna designed for Wi-Fi applications across the 2.4GHz, 5GHz, and 6GHz frequency bands. Optimized for Wi-Fi 6, Bluetooth, ZigBee, and other related wireless protocols, MIRA2 ensures top-tier performance in modern connectivity standards, including C-V2X and DSRC technologies.

Unlike flexible antennas, MIRA2 is built with durable FR4 material, offering a rigid but compact form factor. Measuring just 30 x 6 mm x 0.5 mm, MIRA2 is ideal for integration into devices where space is limited, while still providing robust and reliable connectivity. Its self-adhesive backing enables easy, hassle-free installation—simply peel and stick for secure mounting. MIRA2's design minimizes space usage, fitting seamlessly into tight enclosures without compromising performance.

MIRA2 is engineered for consistent operation even in confined environments, making it an excellent choice for integration into tablets, smart displays, IoT devices, and other small electronics. With its high performance and compact size, it's perfect for modern devices requiring dependable wireless connectivity.

While many wireless modules impose peak gain limits, MIRA2 is designed with a slightly elevated peak gain to ensure strong and reliable connectivity, even when integrated within a device.

Synzen offers free in-depth testing and integration support to help ensure MIRA2 meets all necessary regulatory requirements for your device.

MIRA2 (SZK-C-4W28) is your go-to solution for cutting-edge wireless connectivity in small, constrained spaces, without sacrificing performance.



## Mechanical Specifications

Parameter	
Part Number	SZK-C-4W28
Name	MIRA2
Dimensions (mm)	30.0 x 6.0 x 0.6
Weight	<2.0g
Antenna Type	FPC + Cable
Cable Length (mm)	100.0, 0.81 $\varnothing$ *
Connector	MHF2 (U. FL Compatible) *
Part Number with Cable and Connector	SZK-C-4W28-100-01
Adhesive backing	3M 468

\*Alternate cable length and connectors available upon request

## Electrical / RF Specifications

Band	Frequency Range (MHz)	Efficiency (%)	Peak Gain (dBi)	VSWR	Impedance
Wi-Fi 2GHz	2400-2500	>55	2.40	1.85:1	50 $\Omega$
Wi-Fi 5GHz	4900-5850	>60	2.60	1.90:1	
Wi-Fi 6GHz	5925-7125	>60	2.60	3.20:1	

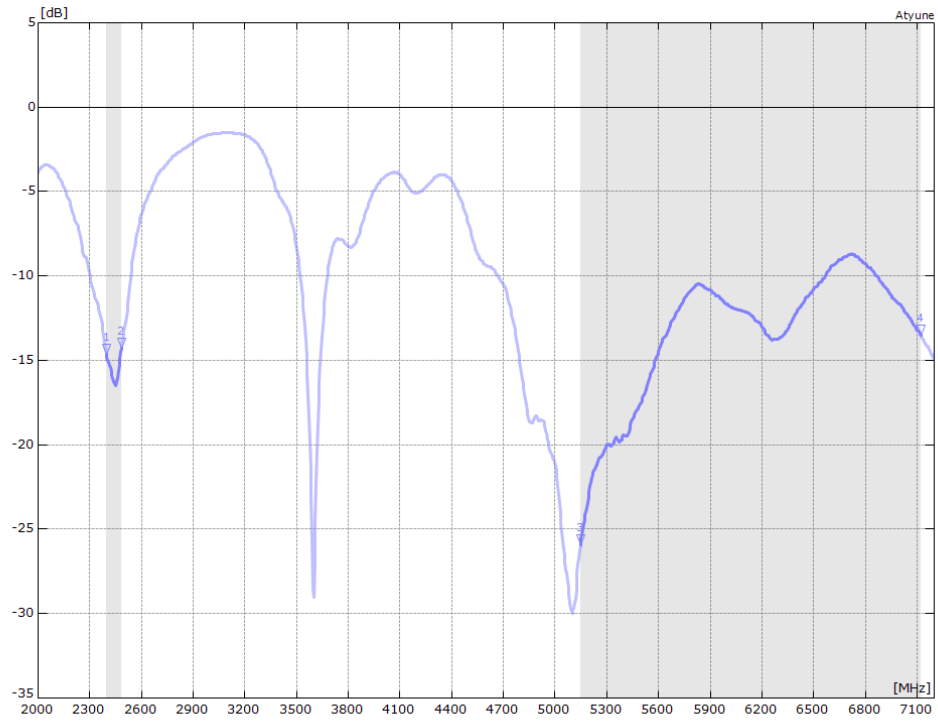
*Note: The antenna performance was measured on a 2mm thick ABS plastic sheet*

## Environmental

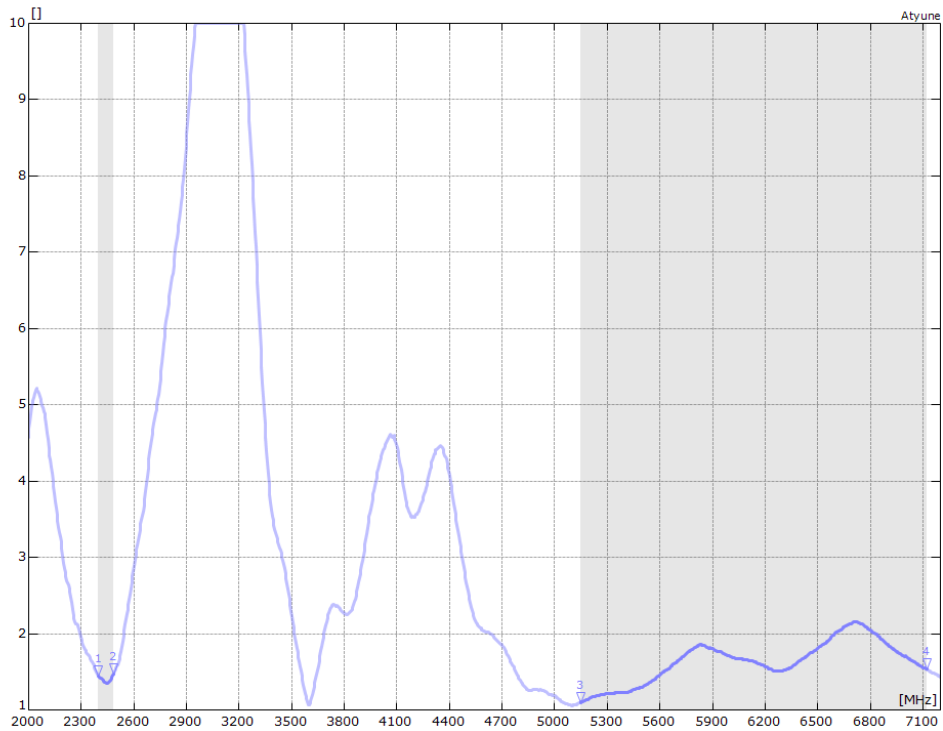
Parameter	
Operational Temperature	-40 to +85
Storage Temperature	-40 to +85
Relative Humidity (Storage)	65 $\pm$ 20% RH
Moisture Sensitivity	1
RoHs and REACH compliant	Yes

# RF Characteristics

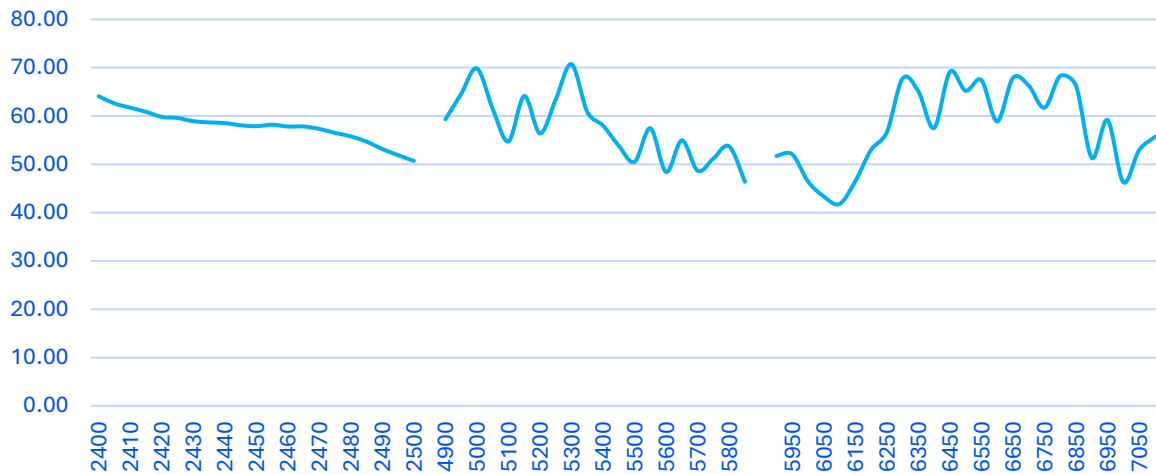
## Return loss



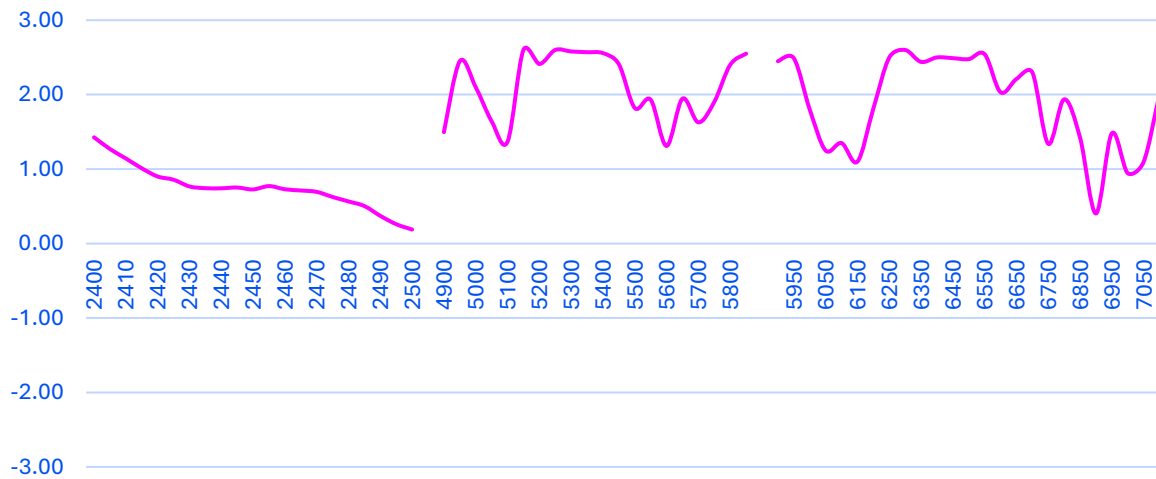
## VSWR



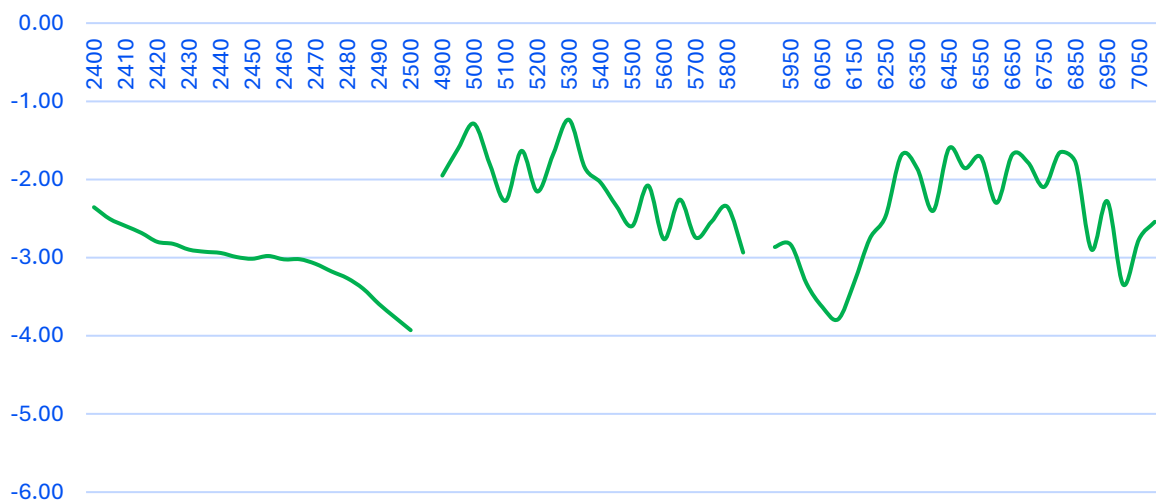
### Efficiency



### Peak Gain

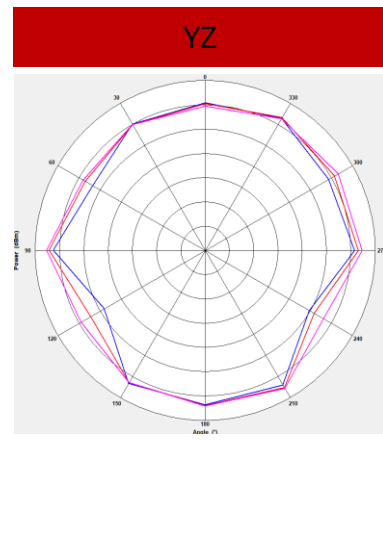
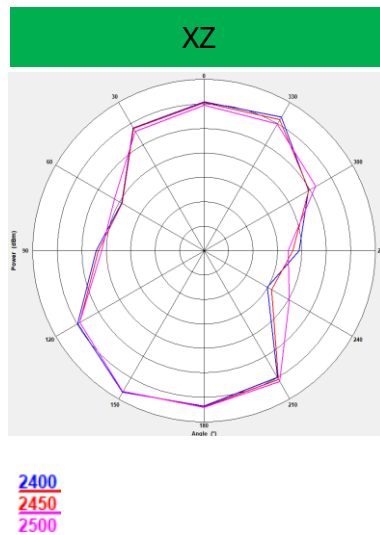
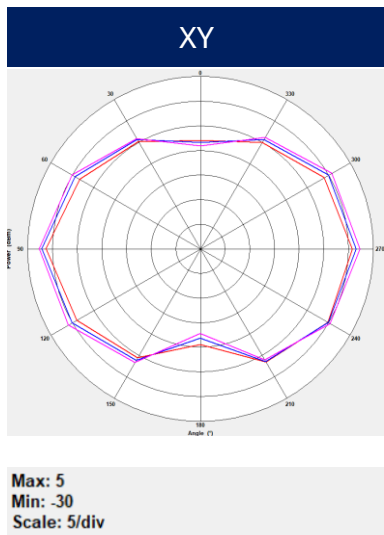
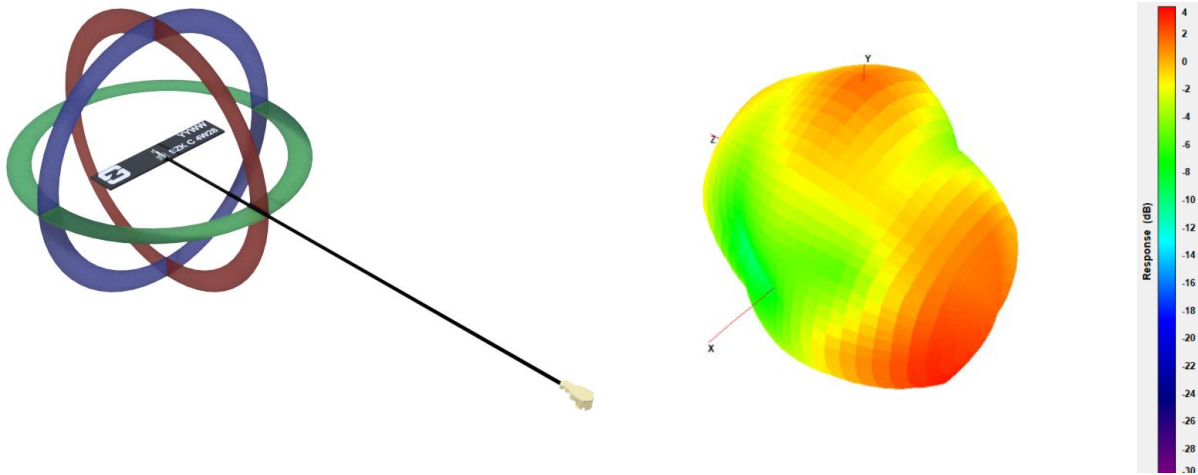


### Average Gain

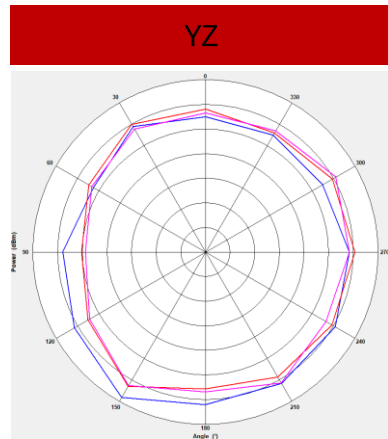
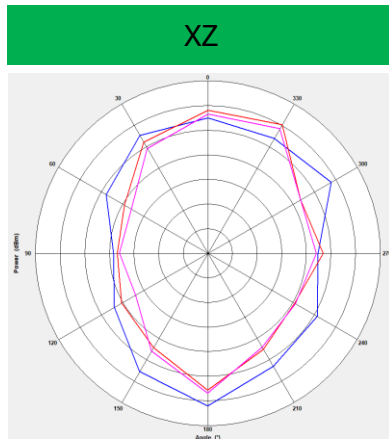
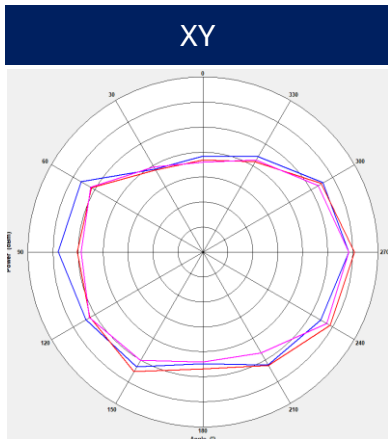
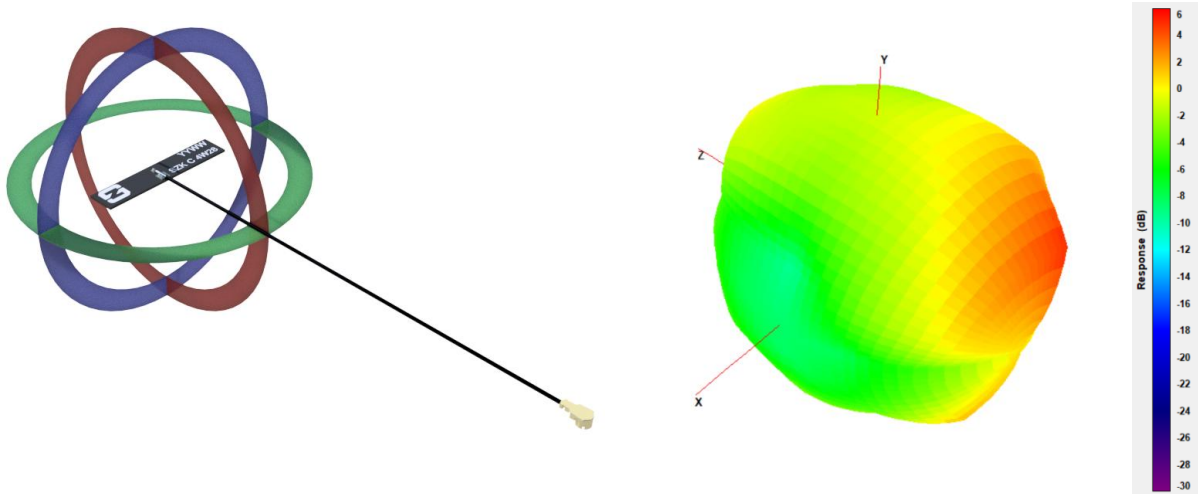


# RF Radiation Patterns

## RF Radiation Patterns at 2450MHz



# RF Radiation Patterns at 5500MHz

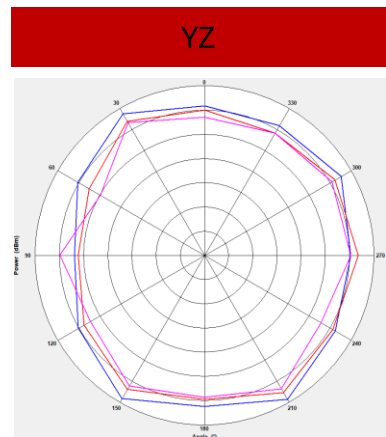
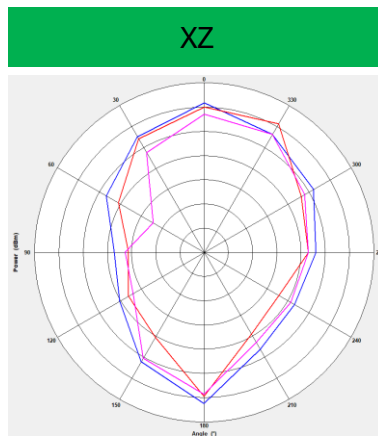
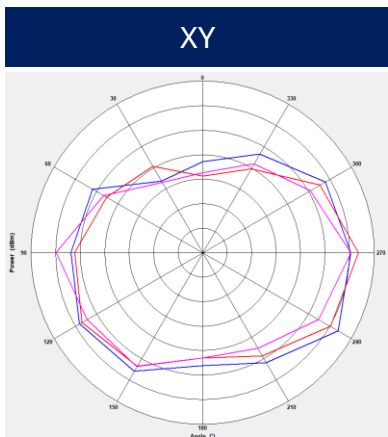
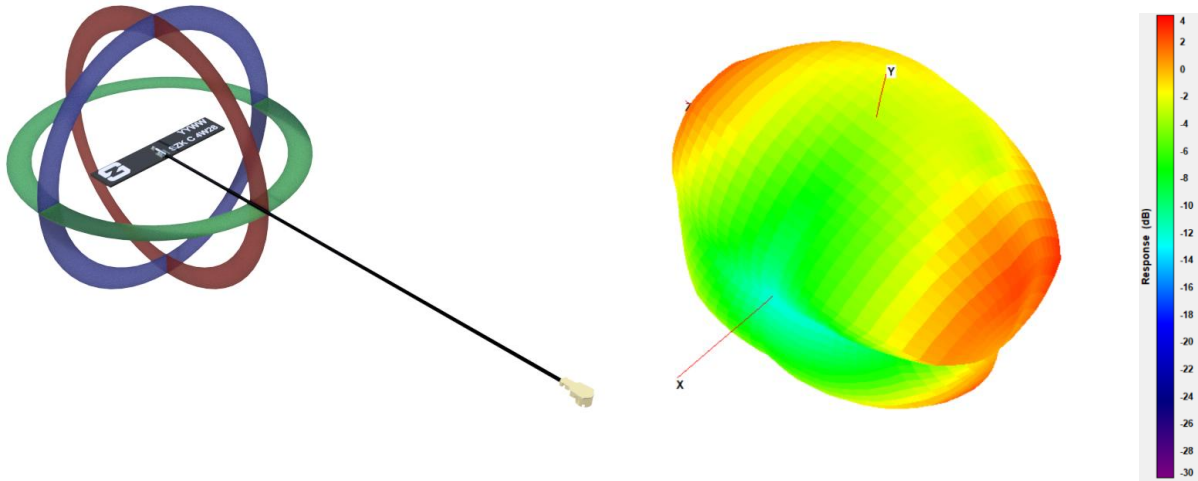


Max: 5  
Min: -30  
Scale: 5/div

5100  
5500  
5850



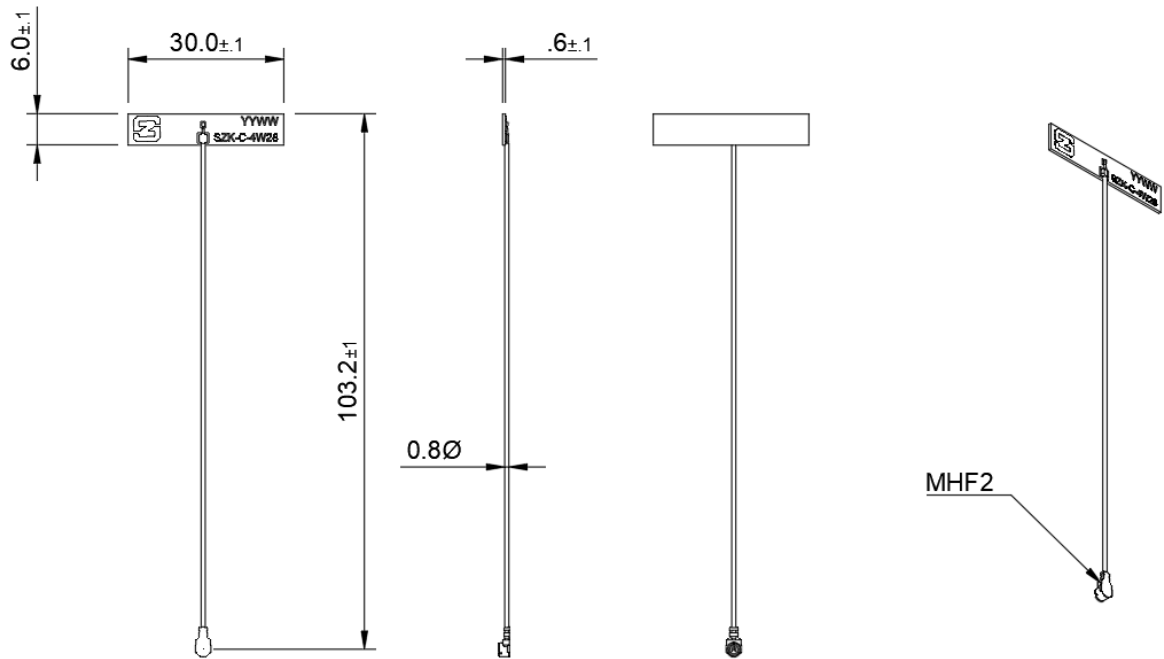
# RF Radiation Patterns at 6500MHz



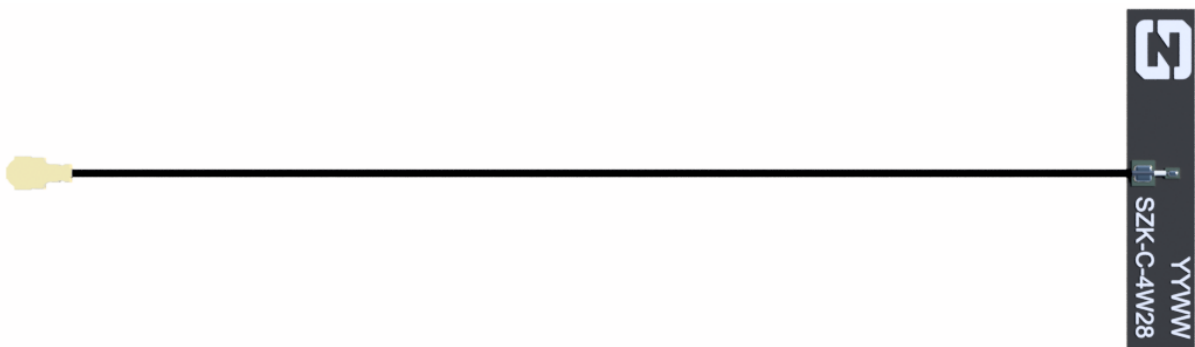
Max: 5  
Min: -30  
Scale: 5/div

6100  
6500  
7100

Mechanical Drawing



ALL DIMENSIONS IN MM



## Packaging

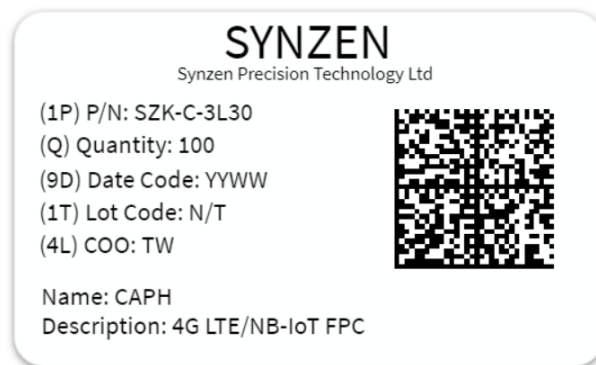
Antennas packed in PE bag (20 per bag)

Small bag dimensions: 28.5 x 9.5 (cm)

100pcs per larger PE bag with product label

Bag dimensions = 30 x 19 (cm)

### Label



## Material Regulation

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

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