

DATASHEET

LEO SZK-C-4W23 | Flexible Self-Adhesive Antenna | WI-FI / Bluetooth

Features:

WI-FI /Bluetooth : 2400-2500MHz

3.50dBi Peak Gain, >70% Efficiency

Dimensions: 22.0 x 6.0 x 0.2 mm

Cable Length: 100mm, 0.81mm Ø

Connector: MHF2 (U.FL Compatible)

RoHs compliant

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Introduction

LEO (SZK-C-4W23) from Synzen is a highly efficient and compact antenna designed specifically for Wi-Fi and Bluetooth applications operating within the 2.4 to 2.5GHz frequency range. Tailored for modern connectivity demands, the LEO ensures reliable, high-performance communication across a wide range of wireless devices, offering an ideal solution for applications such as smart home devices, IoT, and consumer electronics.

Built with precision, the LEO antenna delivers superior performance while maintaining a compact form factor. Measuring 22mm x 6.0mm x 0.2mm, it is designed for easy integration into space-constrained devices. The flexible design, coupled with double-sided adhesive backing, enables simple peel-and-stick installation, allowing for easy positioning in any enclosure.

LEO is engineered to provide consistent, stable performance in challenging environments, making it ideal for integration into small wireless devices where maximizing space without compromising signal strength is essential. The antenna's design also ensures optimized connectivity in both free-space and embedded conditions.

By focusing specifically on the 2.4GHz range, LEO is fine-tuned for peak performance with Wi-Fi and Bluetooth technologies, offering minimal signal interference and enhanced data transmission for a seamless wireless experience.

Synzen provides extensive testing and integration support to ensure that LEO meets all required specifications for your application. Whether used in smart gadgets, wearables, or other wireless-enabled devices, LEO offers dependable connectivity and easy integration, making it an excellent choice for next-generation products.



Mechanical Specifications

Parameter	
Part Number	SZK-C-4W23
Name	LEO
Dimensions (mm)	22.0 x 6.0 x 0.2
Weight	<1.5g
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-4W23-100-02
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	>70	4.80	2.00:1	50 Ω

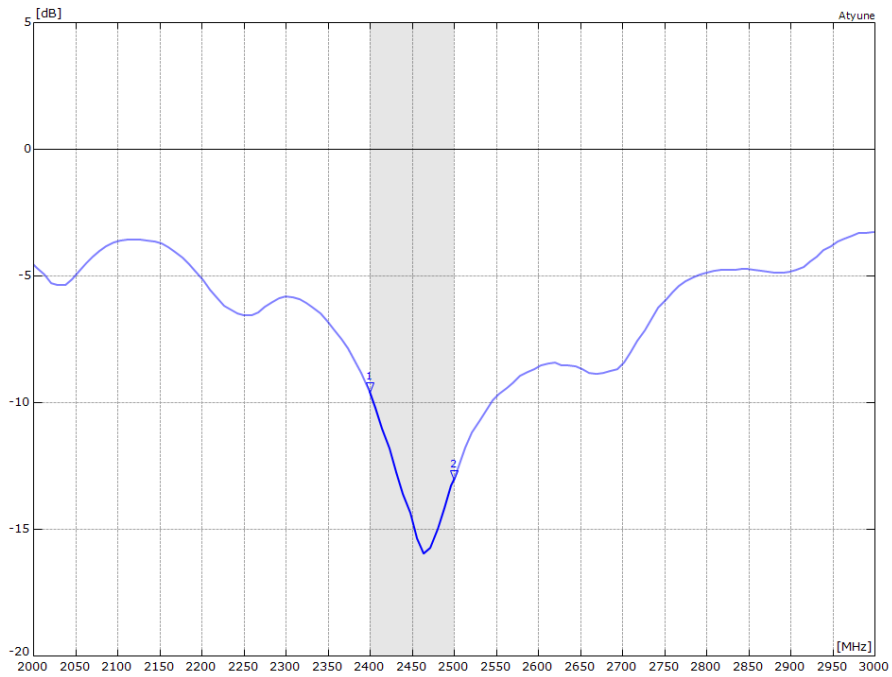
Note: The antenna performance was measured on a 2mm thick ABS plastic sheet

Environmental

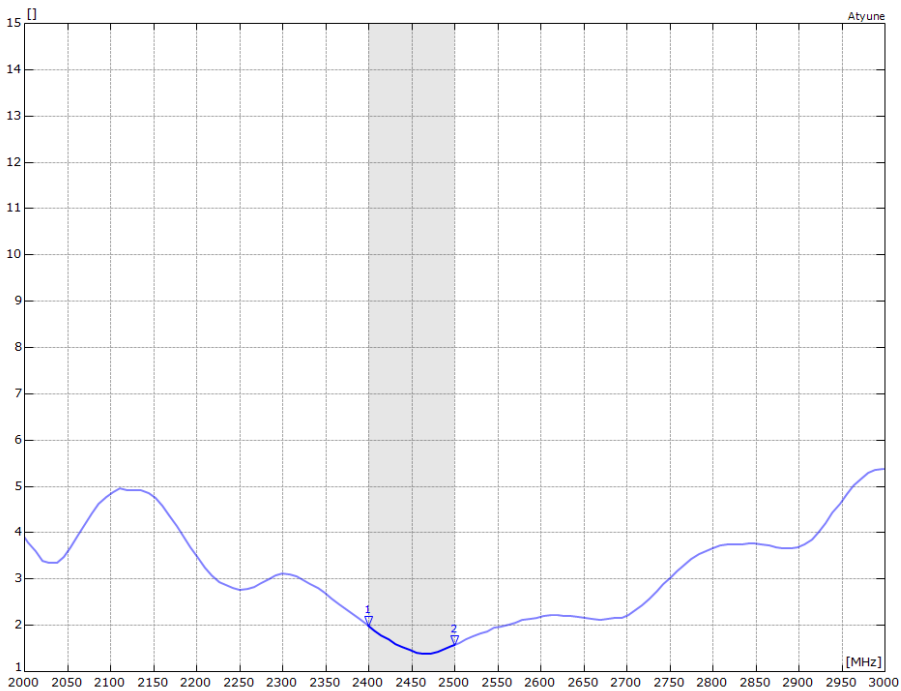
Parameter	
Operational Temperature	-40 to +85
Storage Temperature	-40 to +85
Relative Humidity (Storage)	65 \pm 20% RH
Moisture Sensitivity	1
RoHs and REACH compliant	Yes

RF Characteristics

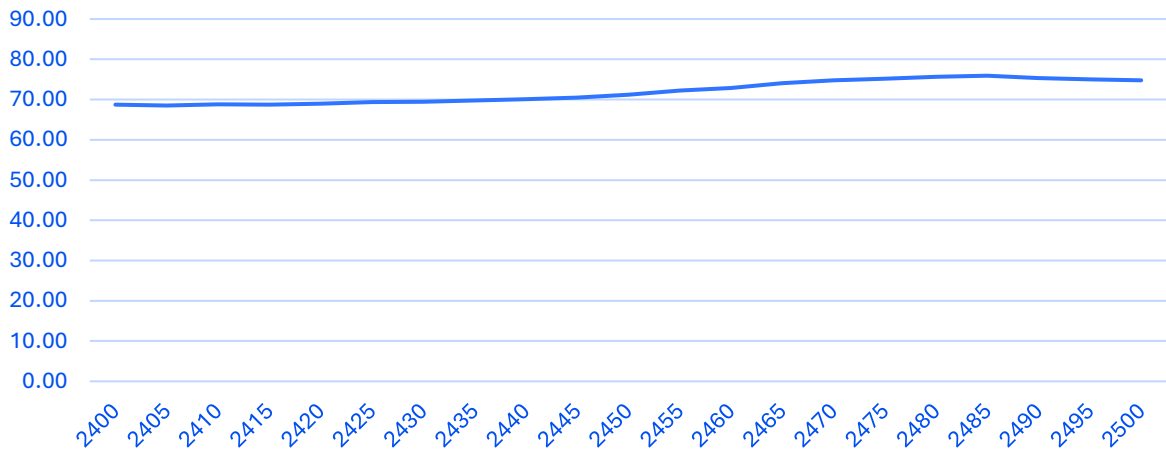
Return loss



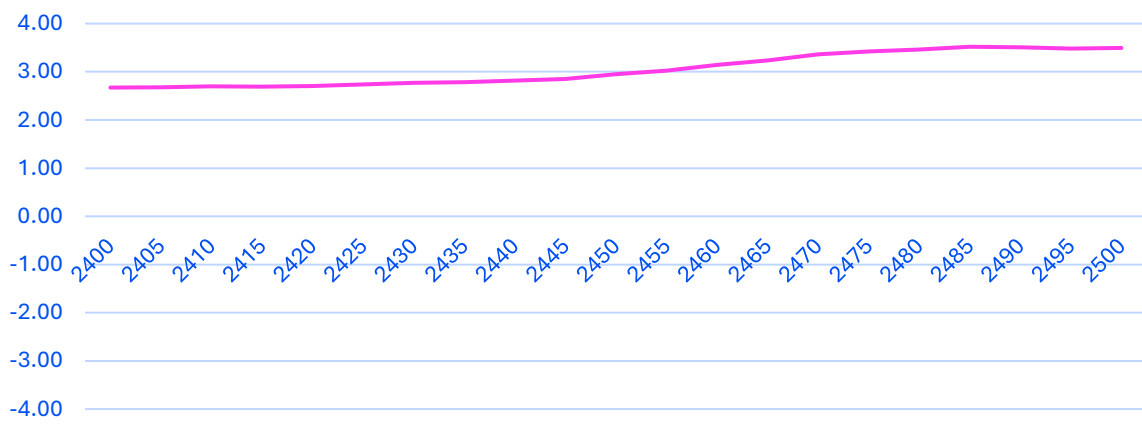
VSWR



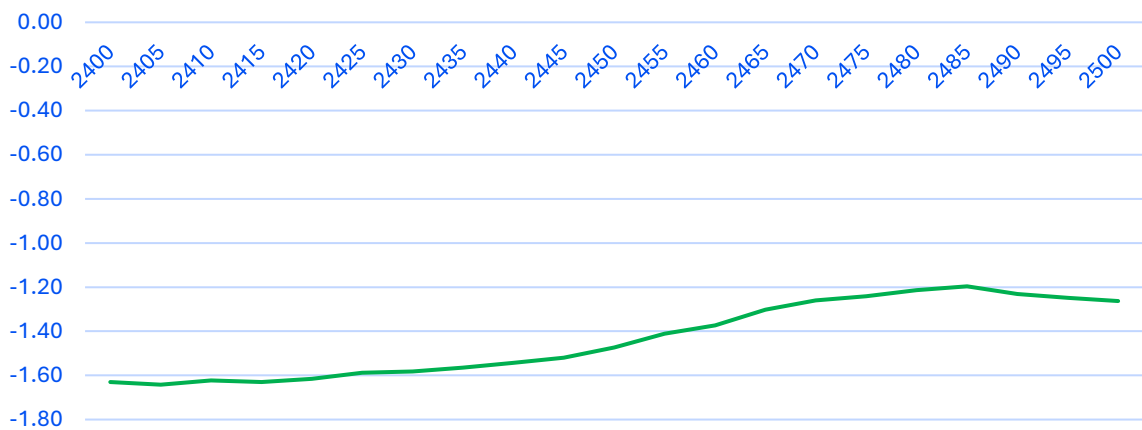
Efficiency



Peak Gain

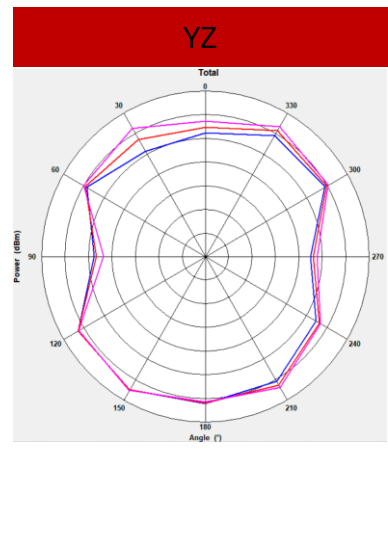
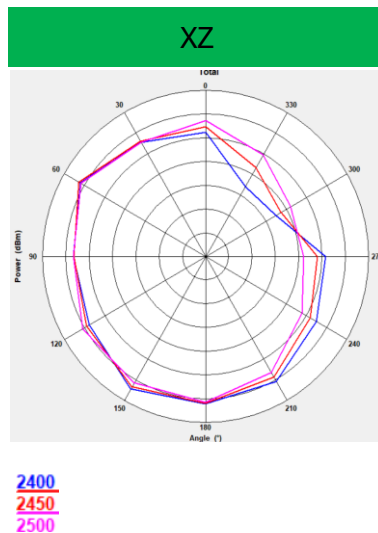
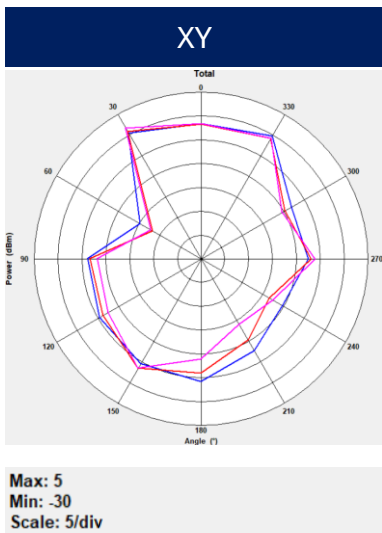
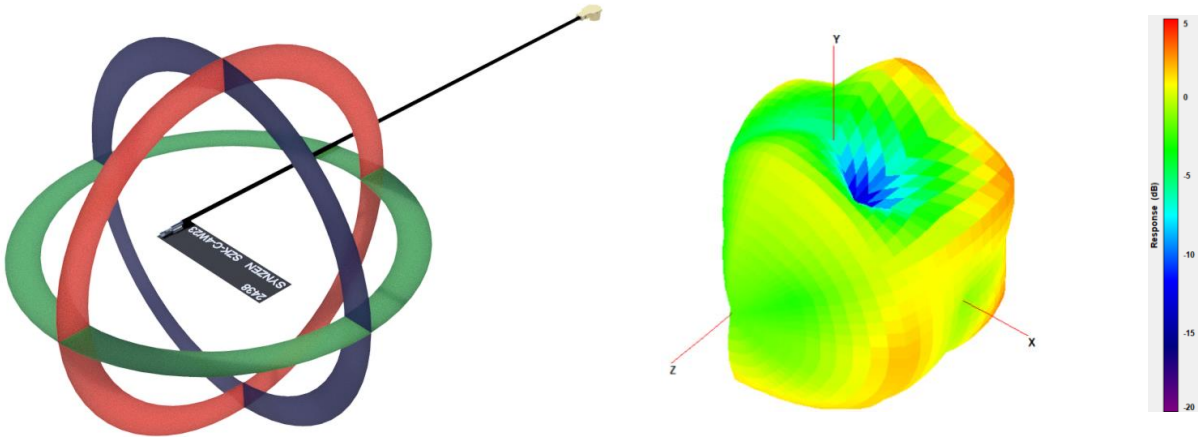


Average Gain

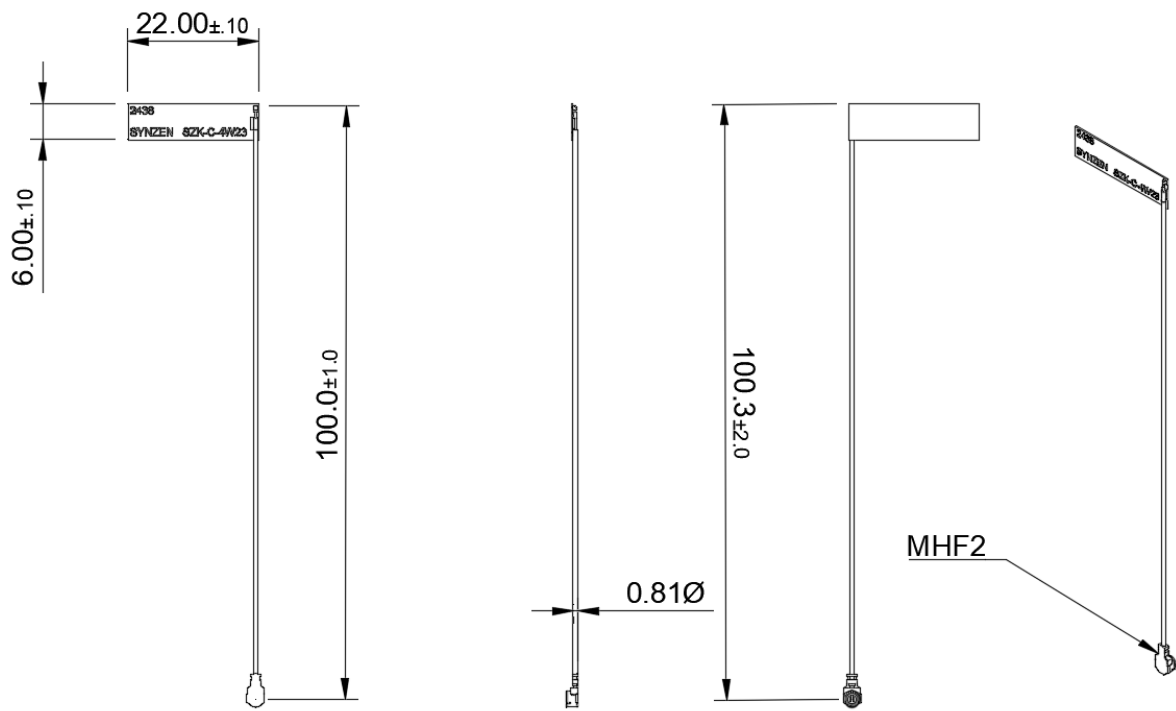


RF Radiation Patterns

RF Radiation Patterns at 2450MHz



Mechanical Drawing



ALL DIMENSIONS IN MM



Packaging

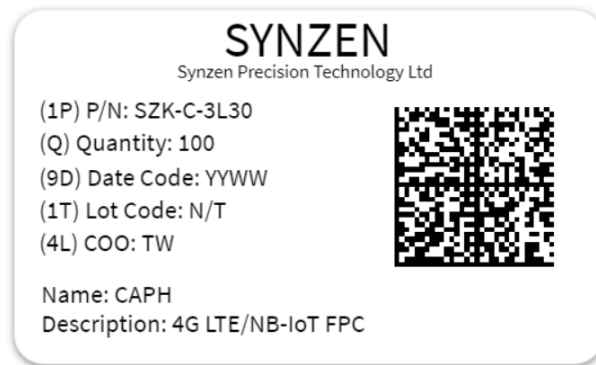
Antennas packed in PE bag (20 per bag)

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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