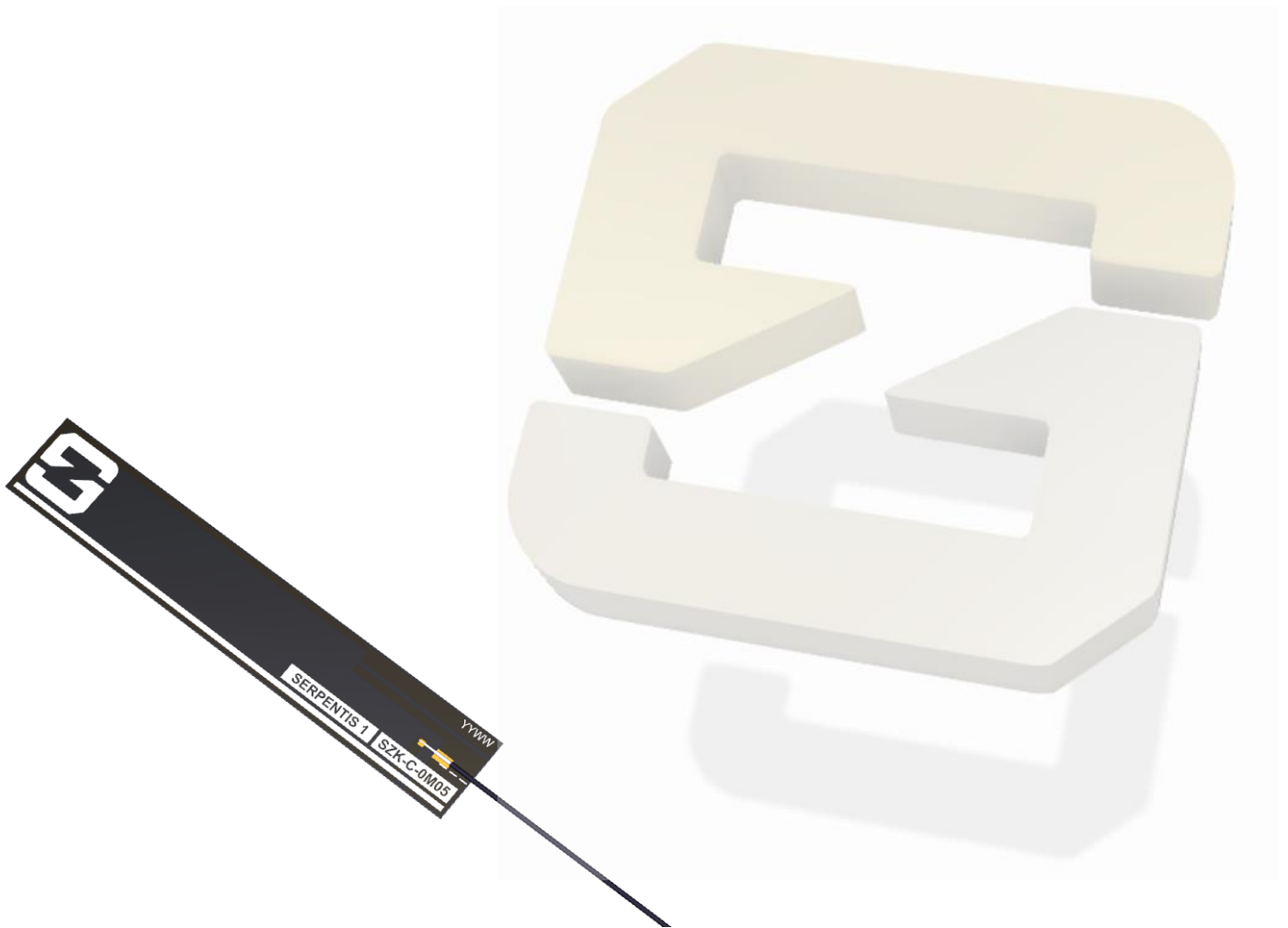




433MHz ISM/LPWA/LTE FPC Antenna

SZK-C-0M05

Frequency Range: 410-427; 430-435; 450-466 MHz



Name: SERPENTIS 1

Part Number: SZK-C-0M05

Description: 433MHz FPC with cable and connector IPEX MHFI (U.FL)

- Also supports LTE bands 31/72/73/87/88
- Flexible PCB Antenna using 3M 468 adhesive
- Dimensions: 88.0 x 15.0 x 0.2 (mm)
- Cable: 180mm length, 1.13mm diameter



433MHz ISM/LPWA/LTE FPC Antenna

SZK-C-0L05

Frequency Range: 410-427; 430-435; 450-466 MHz

Description

A Flexible antenna for Sub-1 GHz and low power wide-area (LPWA) applications including LoRaWAN®. The 433-FPC also performs well in LTE cellular bands 31/72/73/87/88. High performance with an ultra-small form factor for simple integration.

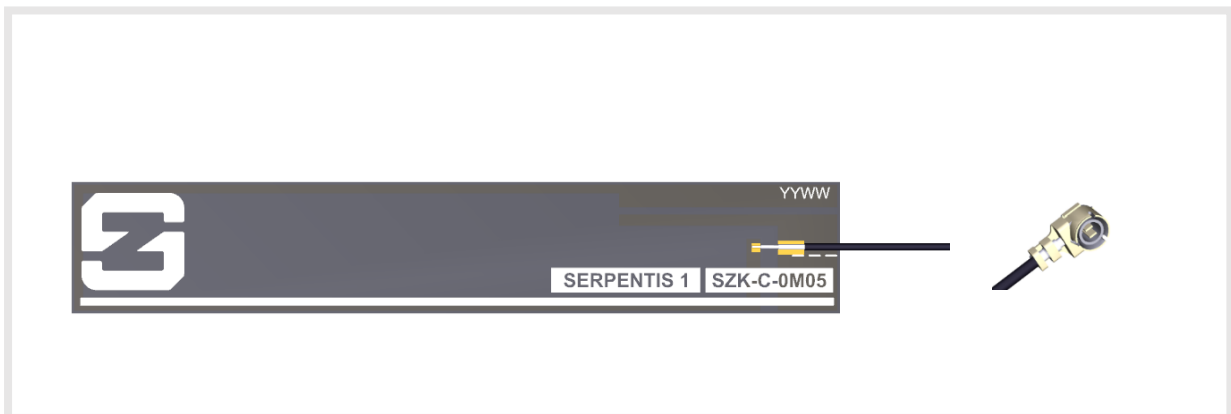
- Ultra-small sub-GHz FPC Antenna at only 88.0 x 15.0 (mm)
- Sub 1GHz for LTE bands 31/72/73/87/88
- Simple integration, plug and operate the device without designing onboard antenna.
- Can be tuned for various environments and plastic thickness with additional Pi network, free tuning service available.
- Alternate cable lengths and connectors available upon request
- sales@synzen.com.tw

Applications

Industrial/Scientific/Medical
Remote Control

M2M Industrial
Remote Monitoring

Smart Meters
Remote Sensing





General Specifications

Mechanical Specifications

Part Number	SZK-C-0M05
Name	SERPENTIS 1
Dimensions	88.0 x 15.0 x 0.2 (mm)
Weight	<2g
Antenna Type	FPC + Cable
Cable Length	180mm, Black
Cable Type	Mini Coax \varnothing 1.13mm
Connector	MHFI (U.FL Compatible)
Adhesive backing	3M 468

RF Specifications

Frequency Range (MHz)	410-427	430-435	450-467
Average Efficiency (Linear)	>30%	>45%	>30%
Peak Gain (dBi)	-3.00	-2.90	-3.00
S11 (max) dB	<-7.5	<-11.5	<-10.0
VSWR (max)	2.65:1	1.80:1	2.00:1
Impedance	50 Ω		
Polarization	Linear		
Max Input Power	5W		

Note: All performance stated is measured 2.0mm ABS plastic, RF chokes used to prevent cable radiation.

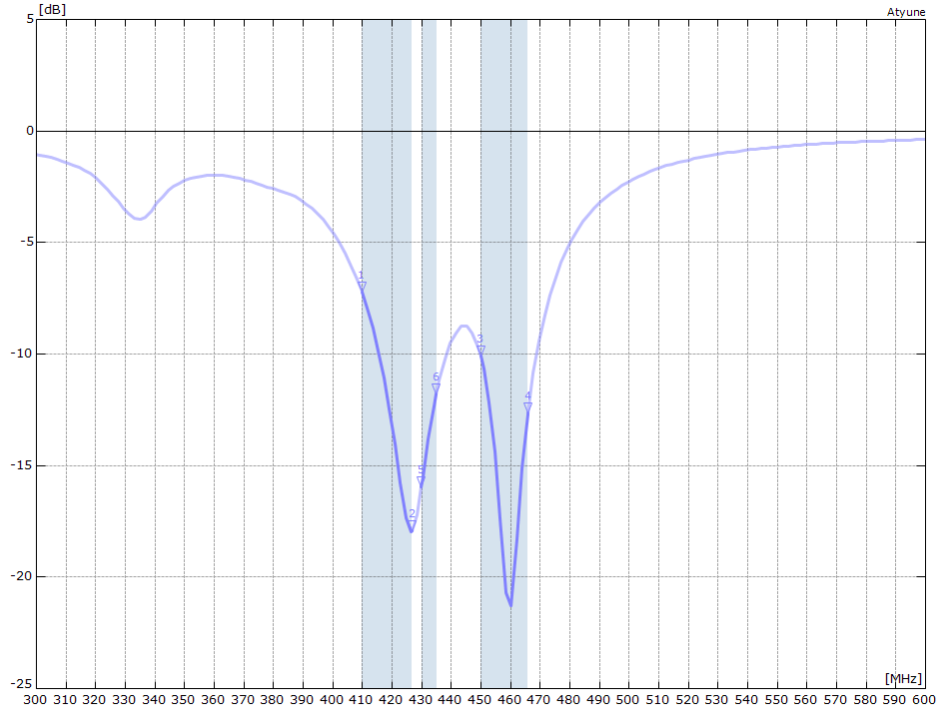
Environmental Specifications

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

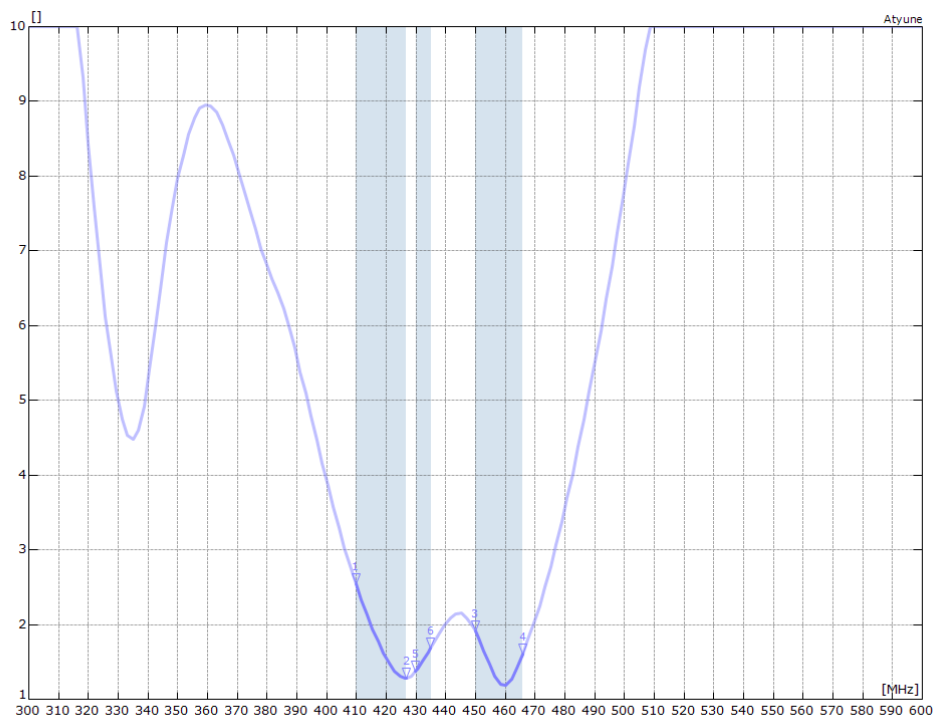


RF Characteristics

S11 Parameter



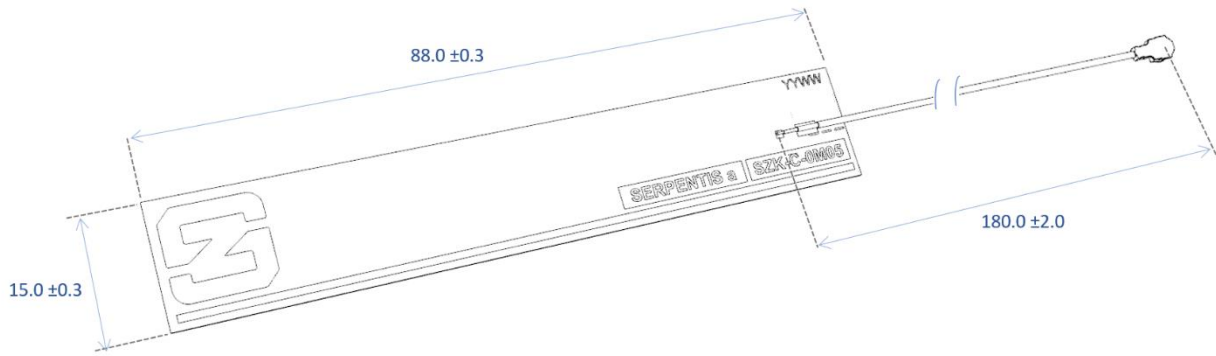
VSWR





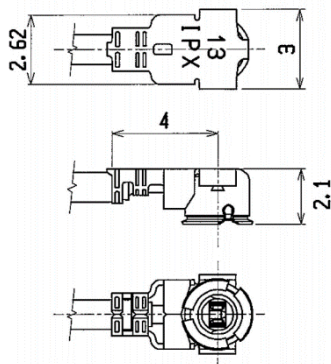
Mechanical

Antenna Mechanical Drawing



All dimensions in mm

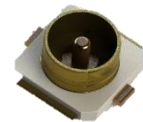
The plug connector on the antenna is an IPEX MHFI.



Suitable PCB mating connector (U.FL) example

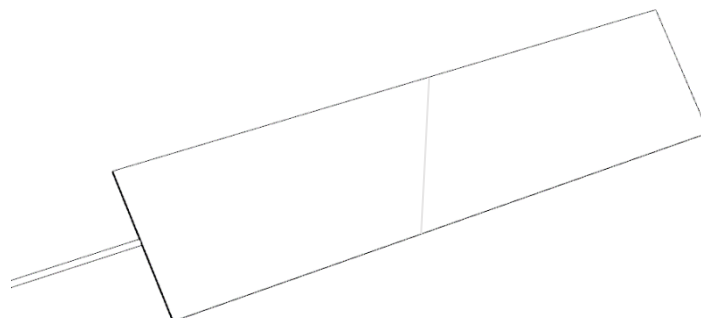
Joymax: Model: CT-MPB01X

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 antenna per bag)

Small bag dimensions: 9.5 x 28.5 (cm)



100pcs per larger bag with product label

Bag dimensions = 19 x 30 (cm)

		SYNZEN	
		SYNZEN PRECISION TECHNOLOGY	
Part Number:	SZP-C-0M05		
Description :	ISM433/LPWA FPC Antenna		
Name:	SERPENTIS 1	<small>A3, 4F, No. 58, Zhouzi St, Neihu Dist., Taipei City, 11493, Taiwan Tel: +886 (02) 2659 8030 www.synzen.com.tw</small>	
Quantity:	1000		
Date code:	YYWW		

Label

- 1000pcs per carton
- 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



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