

Helical Magnetic Base Antenna Datasheet

Overview

Description

Helical Magnetic Base Antenna is an omnidirectional antenna tuned for operation in the license-free spectrum band of 433 MHz, 470-510 MHz, and 860-930 MHz. It is lightweight and can be easily mounted on a metallic surface thanks to its strong magnetic base. This antenna is designed to be a perfect match for RAK7258, with stable performance and good VSWR. The coaxial cable attached to the magnetic base has a length of 1.5 meters.

Features

- Connector Type: **RP-SMA-J**
- Impedance: **50 Ω**
- Frequency Range: 433 MHz, 470-510 MHz, and 860-930 MHz
- Radiation Pattern: **Omnidirectional**

Specifications

Overview



Figure 1: Helical Magnetic Base Antenna 433 MHz



Figure 2: Helical Magnetic Base Antenna 470-510 MHz



Figure 3: Helical Magnetic Base Antenna 860-930 MHz

Hardware

Electrical Characteristics

Parameters	Frequency		
	433 MHz	470-510 MHz	860-930 MHz
Gain	-9.5 dBi	-9.5 dBi	1.27 dBi
VSWR	≤ 2.5	≤ 3.0	≤ 2.0
Efficiency Max	12%	22%	53%
Impedance	50 Ω	50 Ω	50 Ω
Polarization	Linear Polarization - Vertical	Linear Polarization - Vertical	Linear Polarization - Vertical
Radiation Pattern	Omnidirectional	Omnidirectional	Omnidirectional
Connector	RP-SMA-J	RP-SMA-J	RP-SMA-J
Length	142 ± 3 mm	142 ± 3 mm	278 ± 3 mm

Environmental Characteristics

Operation Temperature:

Frequency	Value
433 MHz	-30° C ~ 65° C
470-510 MHz	-30° C ~ 65° C
860-930 MHz	-20° C ~ 65° C

Storage Temperature:

Frequency	Value
433 MHz	-30° C ~ 75° C
470-510 MHz	-30° C ~ 75° C
860-930 MHz	-30° C ~ 75° C

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