

RF
NEXUS

Product Datasheet

NEX15-EXT-KB3-004

Key Features

- LoRa
- Sigfox/Z-Wave/ISM
- 433/435 MHz
- Screw Mount
- Usable With/Without Ground Plane
- Water Resistant
- Dimensions
Ø 42 × 73.5 mm



1- Introduction

The NEX15-EXT-KB3-004 high gain antenna is designed to deliver reliable performance across multiple wireless communication protocols, including LoRa, Sigfox, Z-Wave, and ISM bands, specifically covering the 433/435 MHz frequencies. Its adaptable design makes it perfect for IoT applications that require strong, long-range connectivity in both urban and remote settings.

Featuring a screw-mount system, the NEX15-EXT-KB3-004 allows for easy installation and secure fastening, ensuring stability in a variety of deployment scenarios. It is engineered to function effectively with or without a ground plane, offering flexibility for integration into different systems. Additionally, this antenna is water-resistant, making it ideal for outdoor and harsh environments where durability is key.

With dimensions of $\varnothing 42 \times 73.5$ mm, the NEX15-EXT-KB3-004 combines top-tier performance with a compact, space-saving design, making it well-suited for industries like smart cities, agriculture, logistics, and other IoT-driven sectors. Its robust construction and wide frequency support ensure reliable communication, even in demanding conditions.

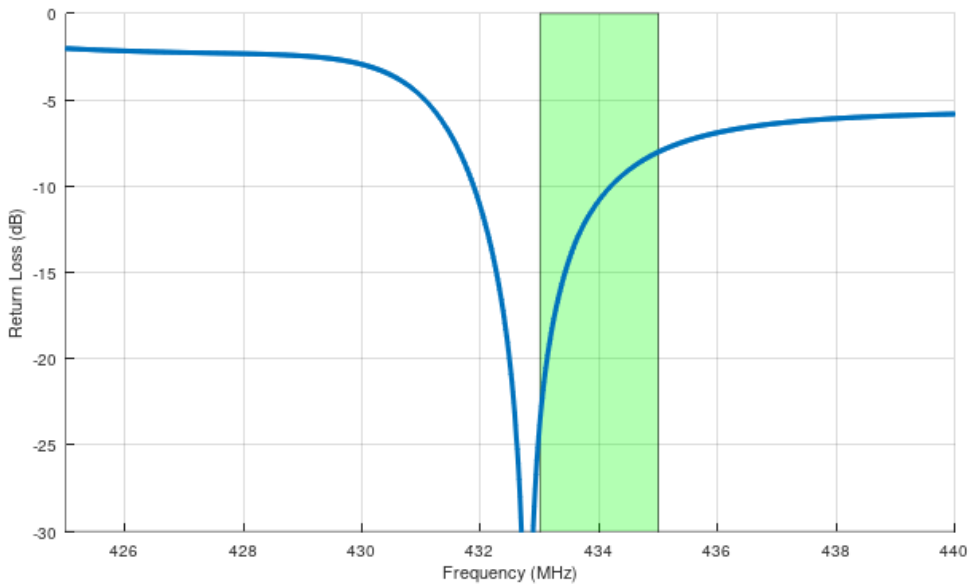
2- Specifications

Mechanical	
Size	73.5 mm
Diameter	42 mm
Connector	SMA(M)
Screw	M12 (1.75)
Casing	ABS(UV)
Weight	36g
Temperature Range	-40°C to 85°C
Electrical	
Frequency (MHz)	433/435
Return Loss (dB)	-8
VSWR (dB)	2.32:1
Efficiency	60%
Peak Gain (dB)	3.1
Impedance	50Ω
Polarization	Linear
Pattern	Omnidirectional

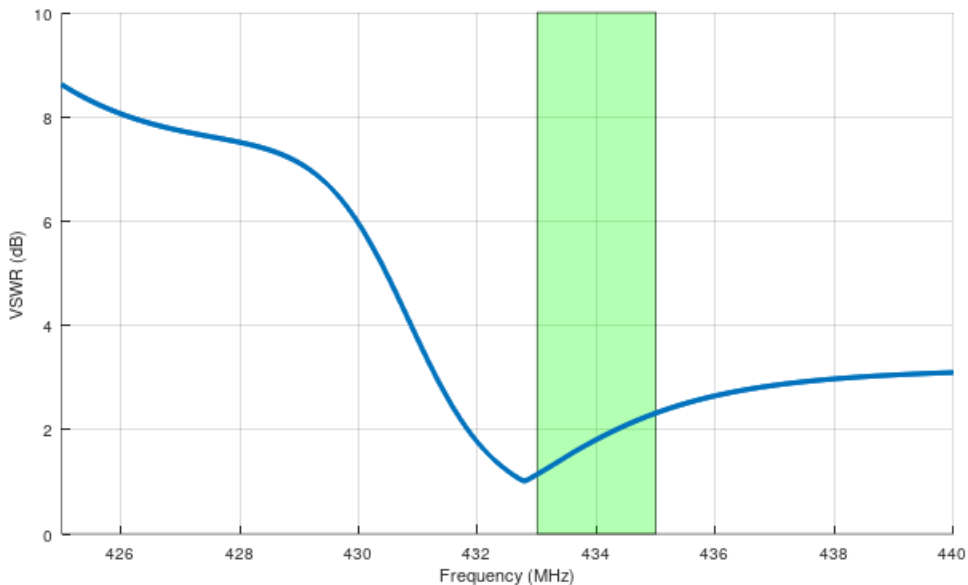
*Data are given for antenna on 30cm diameter circular metal ground plane with 3m LMR195 cable .

3- Antenna Parameters

3.1- Return Loss

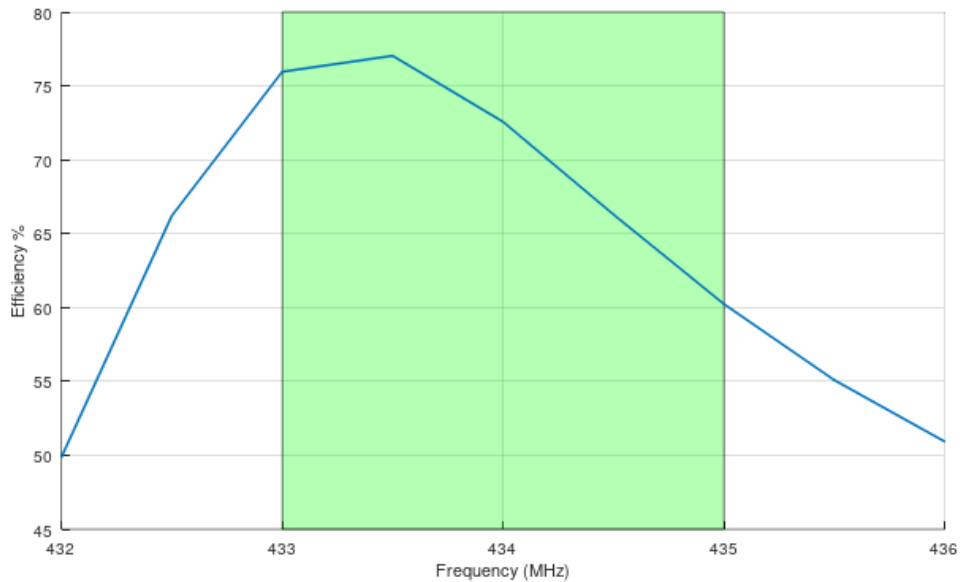


3.2- VSWR



*Data are given for antenna on 30cm diameter circular metal ground plane with 3m LMR195 cable .

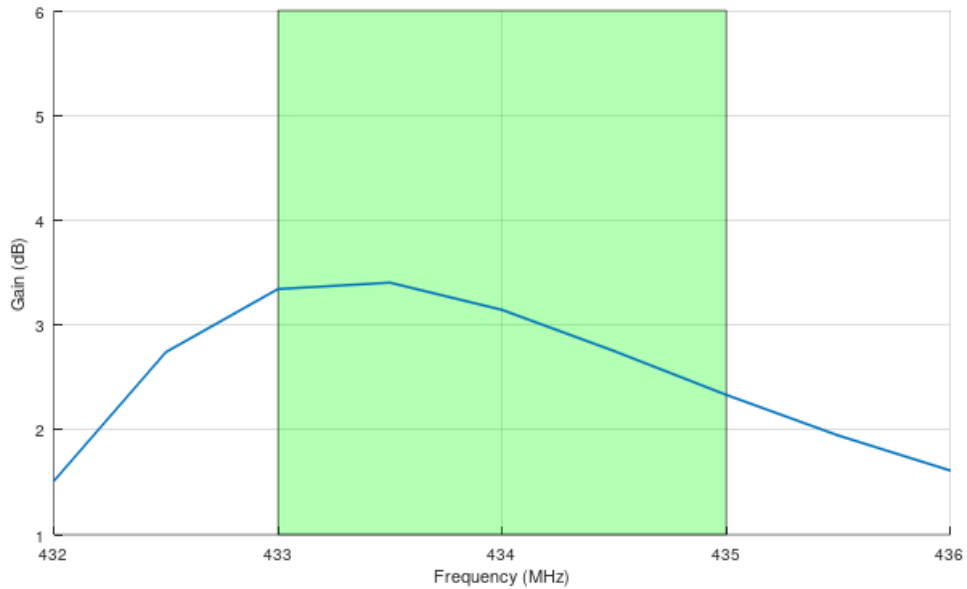
3.3- Efficiency



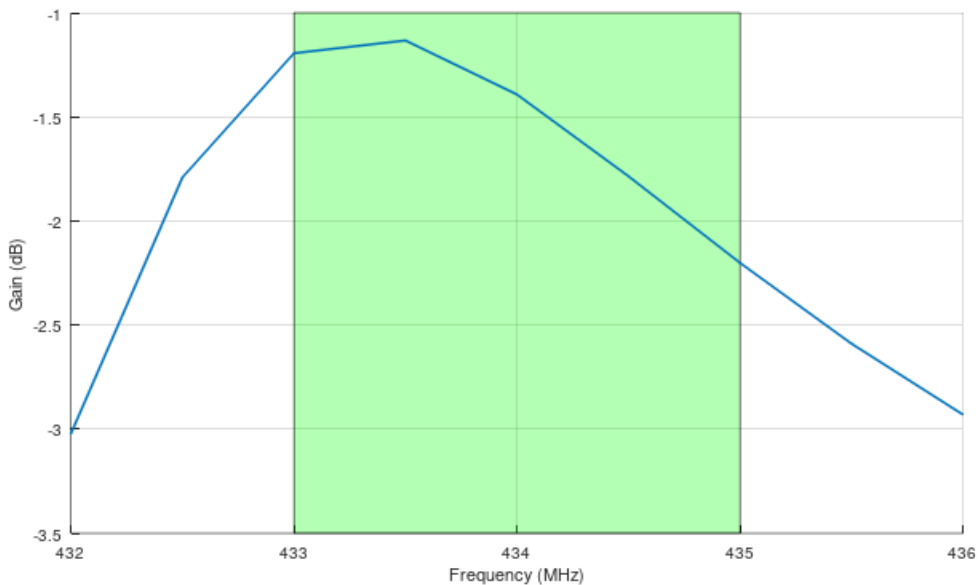
*Data are given for antenna on 30cm diameter circular metal ground plane with 3m LMR195 cable .

4- Radiator Patterns

4.1- Peak Gain

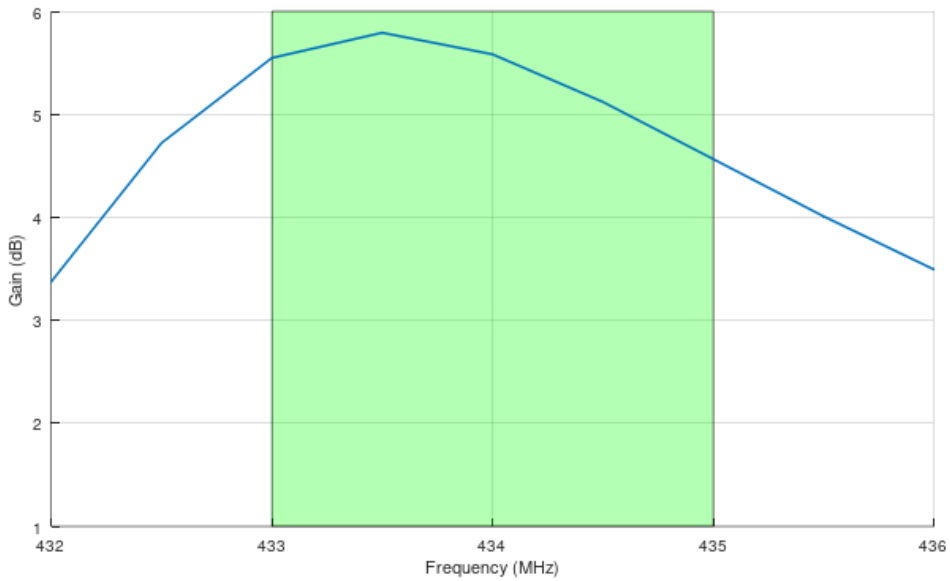


4.2- Average Gain



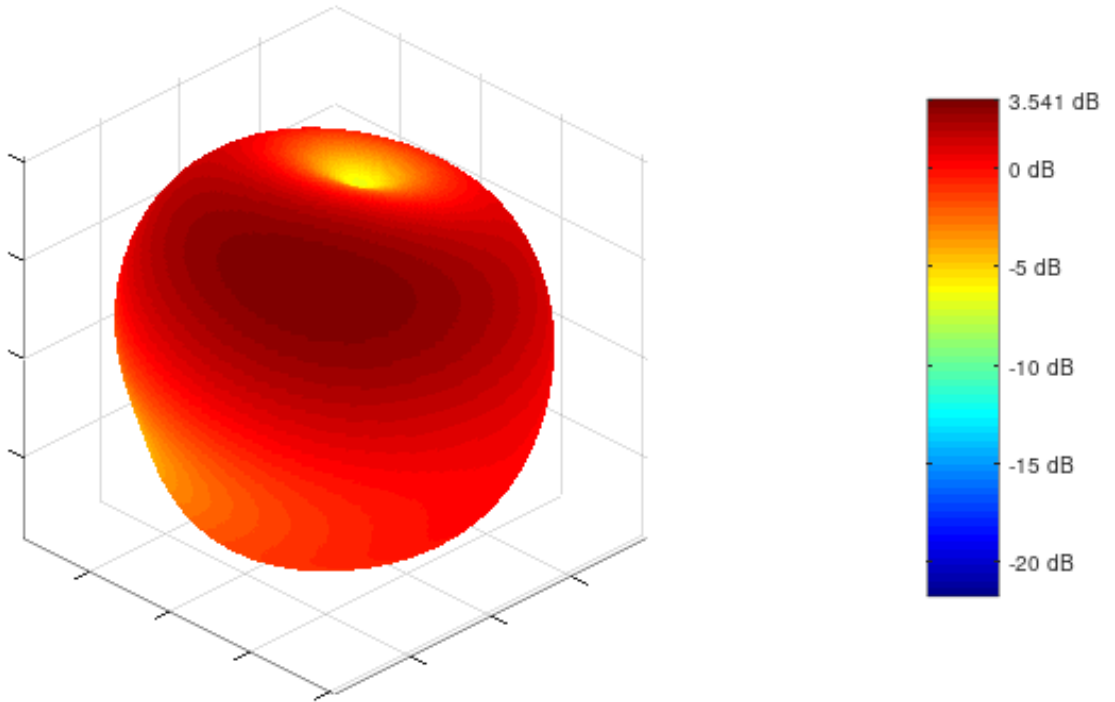
*Data are given for antenna on 30cm diameter circular metal ground plane with 3m LMR195 cable .

4.3- Peak Gain



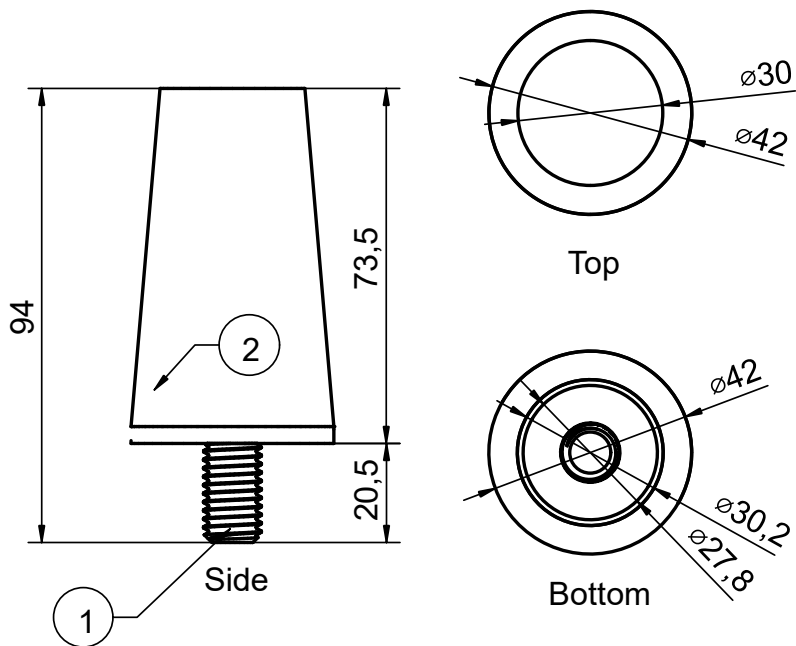
*Data are given for antenna on ground plane with 1.5m LMR195 cable .

4.4- 433 MHz Pattern



*Data are given for antenna on 30cm diameter circular metal ground plane with 3m LMR195 cable .

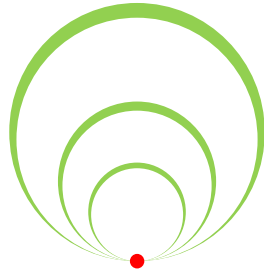
5- Technical Drawing



1	M12 Screw with 1.75 step size
2	ABS-UV

Author: Talha Çalış	Legal owner: RF NEXUS Corp.	Scale: M 1:1	Sheet of 1
Appr.: Talha Çalış		Toler. #/ - ?	Size: A4
TITLE: Plastic Based Cylinder Radom		Part material:	Part number:
		Drawing no.: 1	
		Date: 2024-08-04	Revision: REV A
(R) DO NOT DUPLICATE THIS DRAWING TO THIRD PARTIES WITHOUT OWNER'S PERMISSION !			





**RF
NEXUS**



+90 530-716-6670



www.nexus-rf.com



info@nexus-rf.com



**İvedikOSB Mh. 2224. Cad.
No:1 - 117/A
Yenimahalle / Ankara**