

RAK PCB Antenna for LoRa® 863-870 MHz (RAKARB04) Datasheet



Overview

Description

RAKARB04 PCB antenna is a small antenna, suitable for all LoRa and LoRaWAN end devices. It comes with an IPEX connector for easy attachment. It is compatible with all WisTrio, WisDuo, and WisBlock products with IPEX interface.

Features

- Frequency range: 863 ~ 870 MHz
- Peak gain: 0.7 dBi
- VSWR: ≤ 2
- Dimensions: 35x7x0.5 mm
- Impedance: 50 Ω
- Connector type: IPEX

Specifications

Electrical Specifications

Parameter	Value
Frequency range	863 ~ 870 MHz
Peak gain	0.7 dBi
VSWR	≤ 2
Polarization	Linear
Efficiency	41.6%
Feed impedance	50 Ω
Connector type	IPEX

Mechanical Specifications

Parameters	Value
Product dimensions	35x7x0.5 mm
Operating humidity	10% ~ 95% RH non condensing
Base material	ABS+PC
Installation method	Adhesive strip attached to the base
Use environment	Indoor use / In enclosure for outdoor use
Cable length	100 mm

Return Loss & Smith Chart

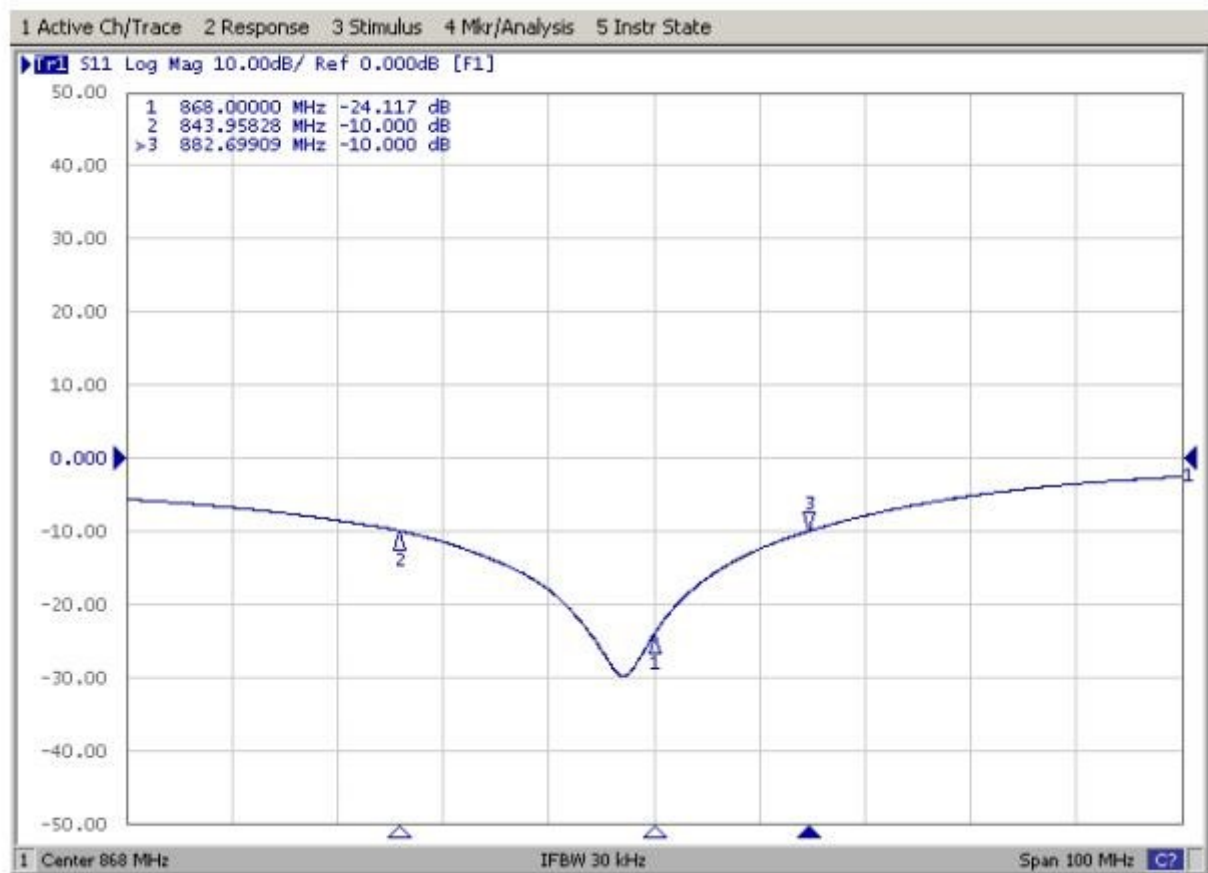


Figure 1: Return loss

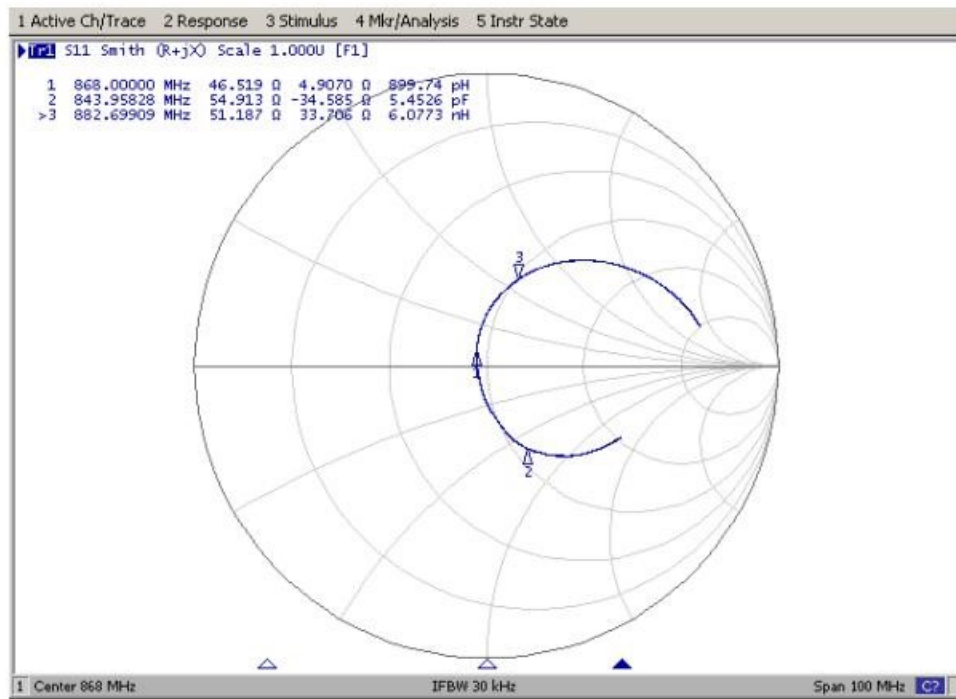


Figure 2: Smith chart ## Efficiency

Frequency (MHz)	Efficiency (%)	Peak gain (dBi)
863	36	0.47
864	36.8	0.52
865	37.1	0.59
866	38.2	0.61
867	39.9	0.65
868	41.6	0.7
869	39.9	0.64
870	41.2	0.68
871	40.2	0.63
872	40	0.71
873	40.3	0.68

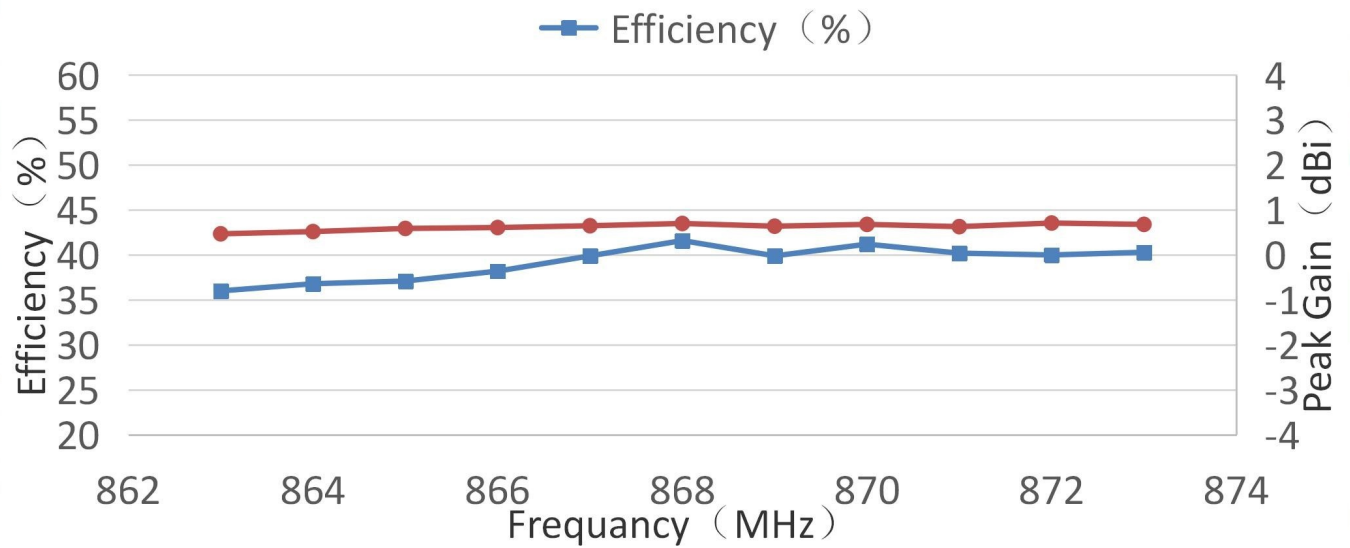
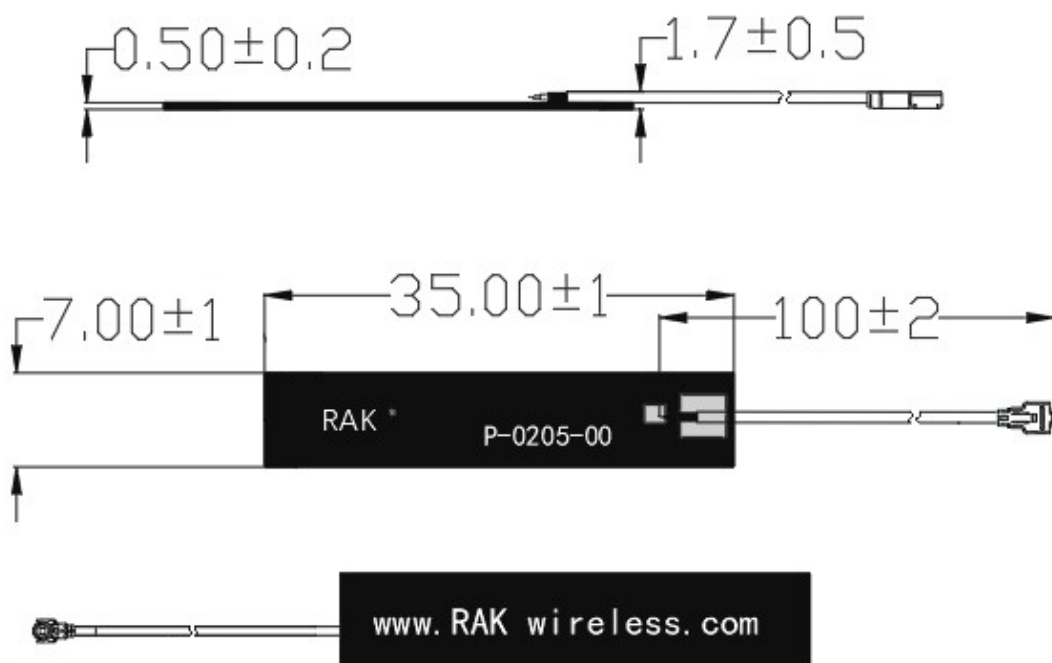


Figure 3: Efficiency vs. Frequency chart

Antenna dimensions



Unit : mm

Figure 4: Antenna dimensions