



Measurement Report

Nokeval, RHT-1, 916 MHz variant

Revision History

Rev.	Date	Description
1.0	30.01.2025	Initial version
1.1	05.02.2025	Fixed efficiency and gain values
1.2	11.02.2025	Updated new measurement
1.3	23.10.2025	Updated S11 and components



EXECUTIVE SUMMARY

This measurement report details the antenna measurements for RHT-1 (LoRa 916 MHz).

TABLE OF CONTENT

EXECUTIVE SUMMARY	1
MEASUREMENT SETUP	3
MEASUREMENT RESULTS.....	4
MATCHING CIRCUIT.....	6
RADIATION PATTERN.....	7
916 MHz.....	7
Additional measurements.....	8
Antenna raw impedance.....	8
CONCLUSIONS AND RECOMMENDATIONS.....	9
ATTACHMENTS.....	10
HOW DID WE DO?	0

MEASUREMENT SETUP

The device was measured in free-space conditions.

MEASUREMENT RESULTS

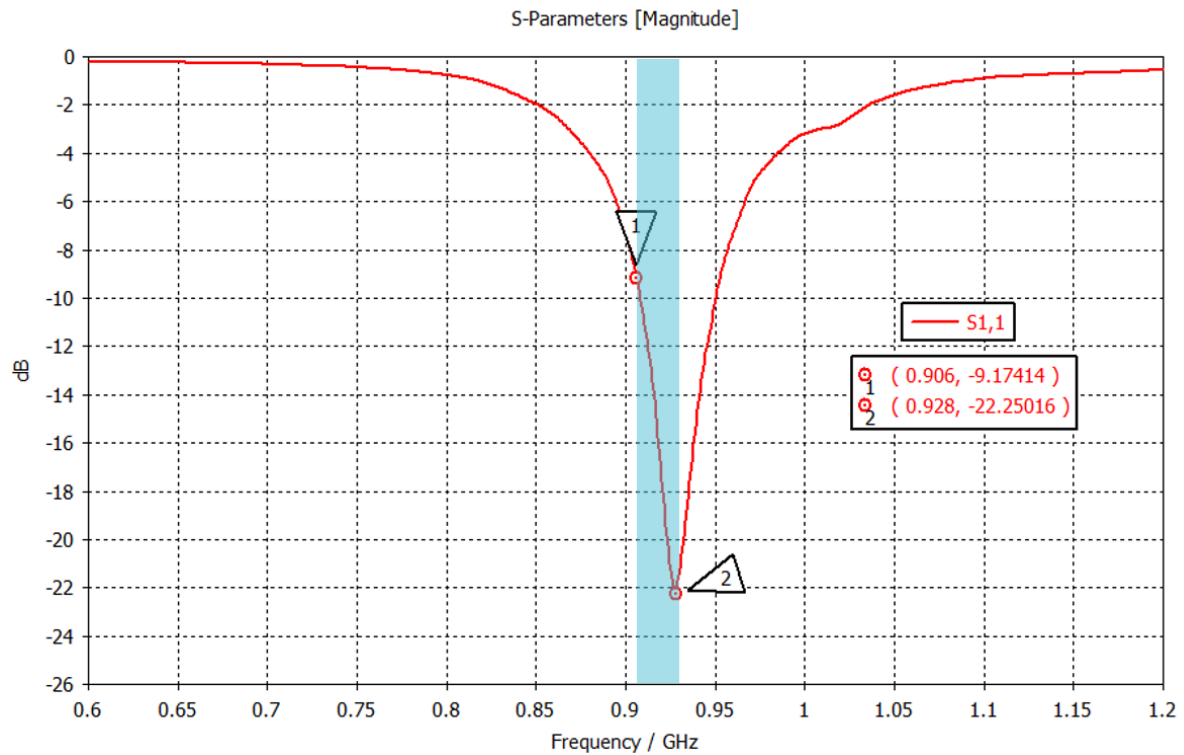


Figure 1: Return loss (S_{11})

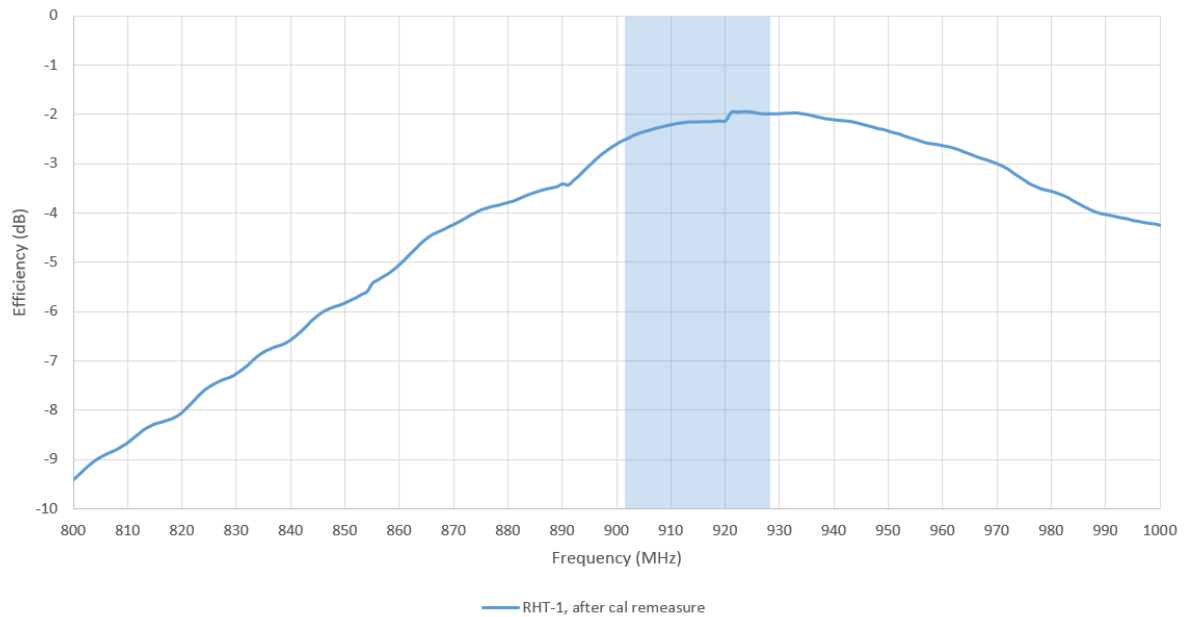


Figure 2: Total efficiency

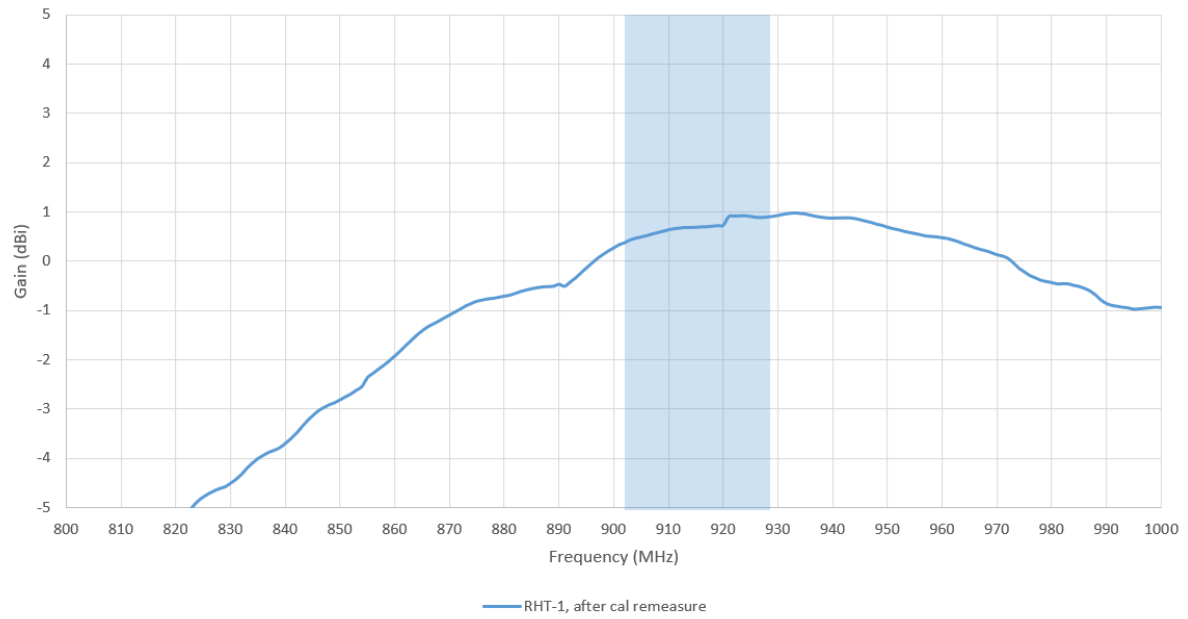
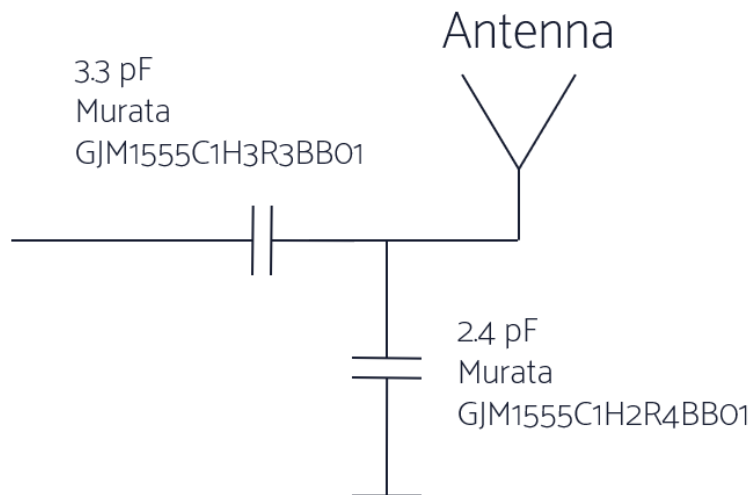


Figure 3: Maximum gain

RHT-1, maximum gain, LoRa 916 MHz (908-928 MHz)	+0.9 dBi
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MATCHING CIRCUIT

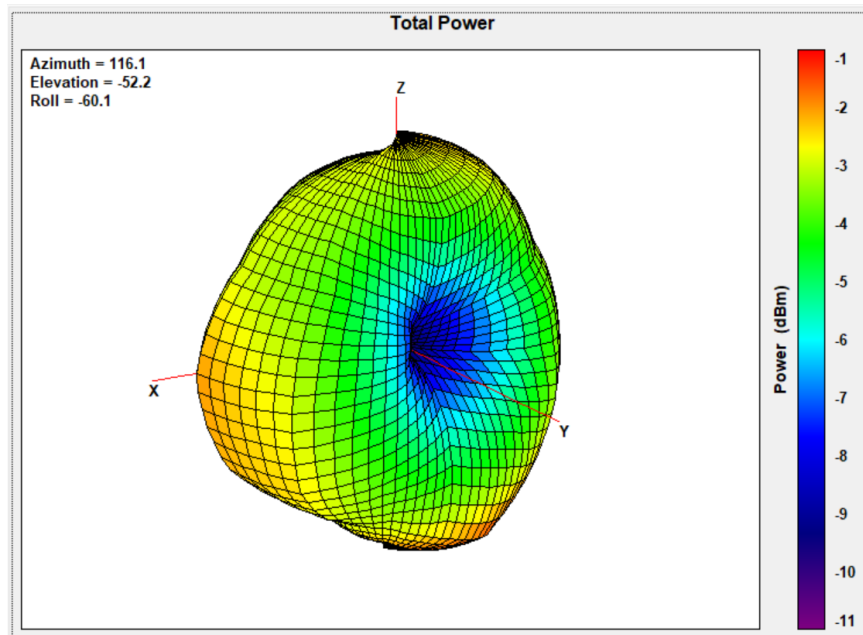


Capacitor, 2.4 pF, Murata GJM1555C1H2R4BB01

Capacitor, 3.3 pF: Murata GJM1555C1H3R3BB01

RADIATION PATTERN

916 MHz



ADDITIONAL MEASUREMENTS

Antenna raw impedance

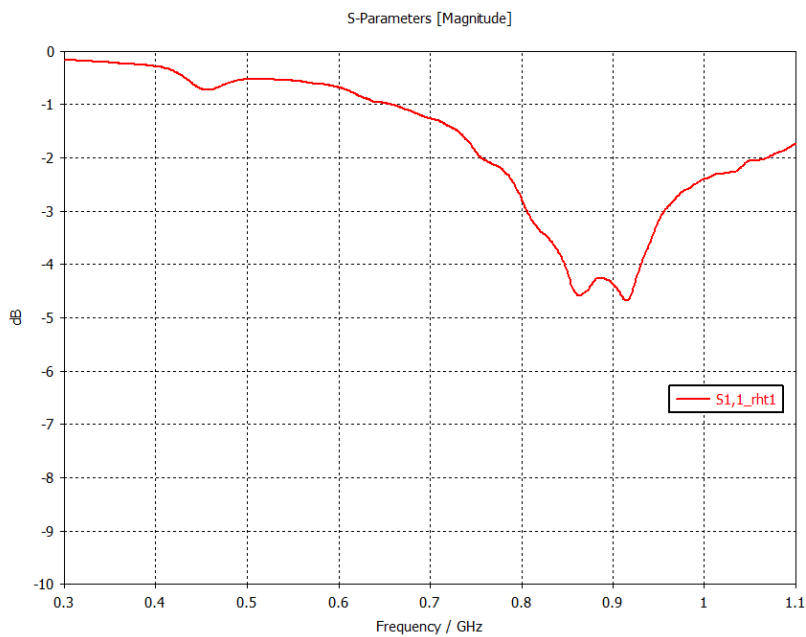


Figure 4: Return loss (S_{11}) of antenna without matching components

CONCLUSIONS AND RECOMMENDATIONS

The LoRa antenna of the device performs well. Antenna matching is expected to behave well when the device is installed on a wood or wood-like surface.

ATTACHMENTS

Radiation pattern files:

- RHT-1_2025.02.10.15.20.52.raw

HOW DID WE DO?

We would greatly appreciate if you could provide feedback on how we managed to serve you by using the link below:

[Leave your feedback now](#)