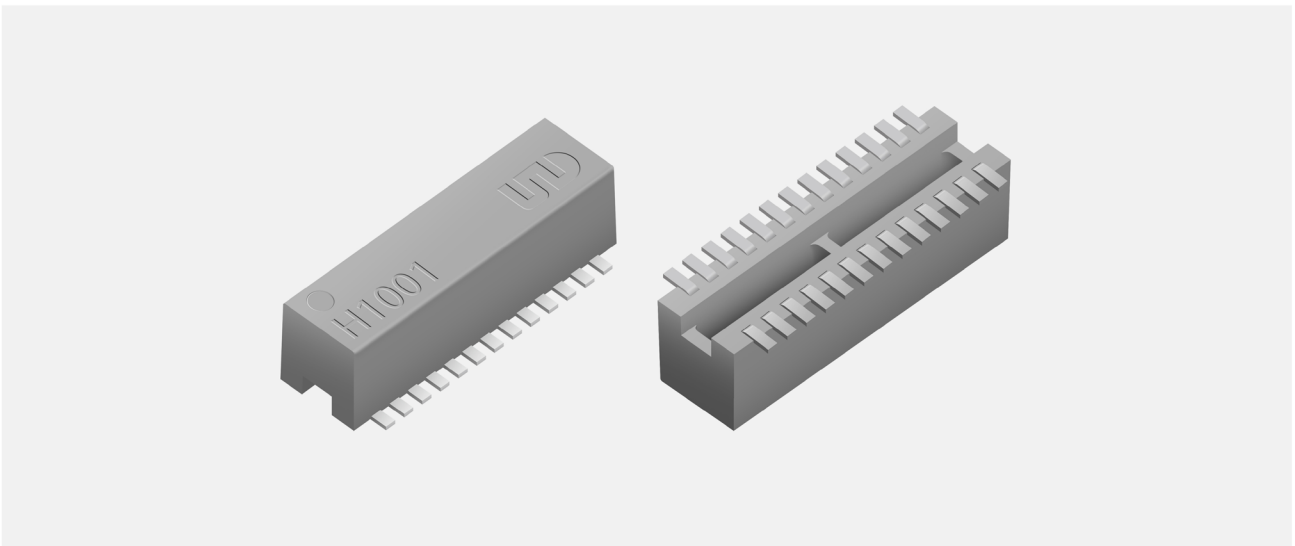


SYMMETRIC ANTENNA WITH MULTI-MODE FUNCTIONALITY

860-930 MHz

Clearance Area: 12 x 40 mm

Dimensions: 14.5 x 5.6 x 4.3 mm (Tolerance: ± 0.15 mm)



PN: M01-X21506UWB2

Note: We support frequency customization.





Table of Contents

1 FEATURES & BENEFITS	1
2 APPLICATIONS.....	1
3 ORDER INFORMATION.....	1
4 ANTENNA CERTIFICATION	1
5 MECHANICAL DIMENSIONS.....	2
6 REFERENCE GUIDE	3
7 EVALUATION BOARD WITH THE ANTENNA	3
8 MATCHING NETWORK	4
9 RECOMMENDED LAYOUT.....	4
10 ELECTRICAL PERFORMANCE	5
10.1 VSWR and S11 (dB)	5
10.2 Gain (dBi) and Total Efficiency (%).....	6
10.3 Radiation Patterns (915 MHz)	7
11 SOLDERING CONDITIONS.....	8
12 PACKAGING	8
12.1 Optimal Storage Conditions for Packaged Reels	8
12.2 Packagings and Dimensions (Unit: mm).....	9

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1 FEATURES & BENEFITS

- Low Profile
- Light Weight
- Easy to Integrate
- Intended for SMD Mounting
- Reduced Cost and Time-to-Market

2 APPLICATIONS

- IoT Devices
- Smart Cities
- Smart Agriculture
- Consumer Tracking
- Smart Metering
- Smart Agriculture

3 ORDER INFORMATION

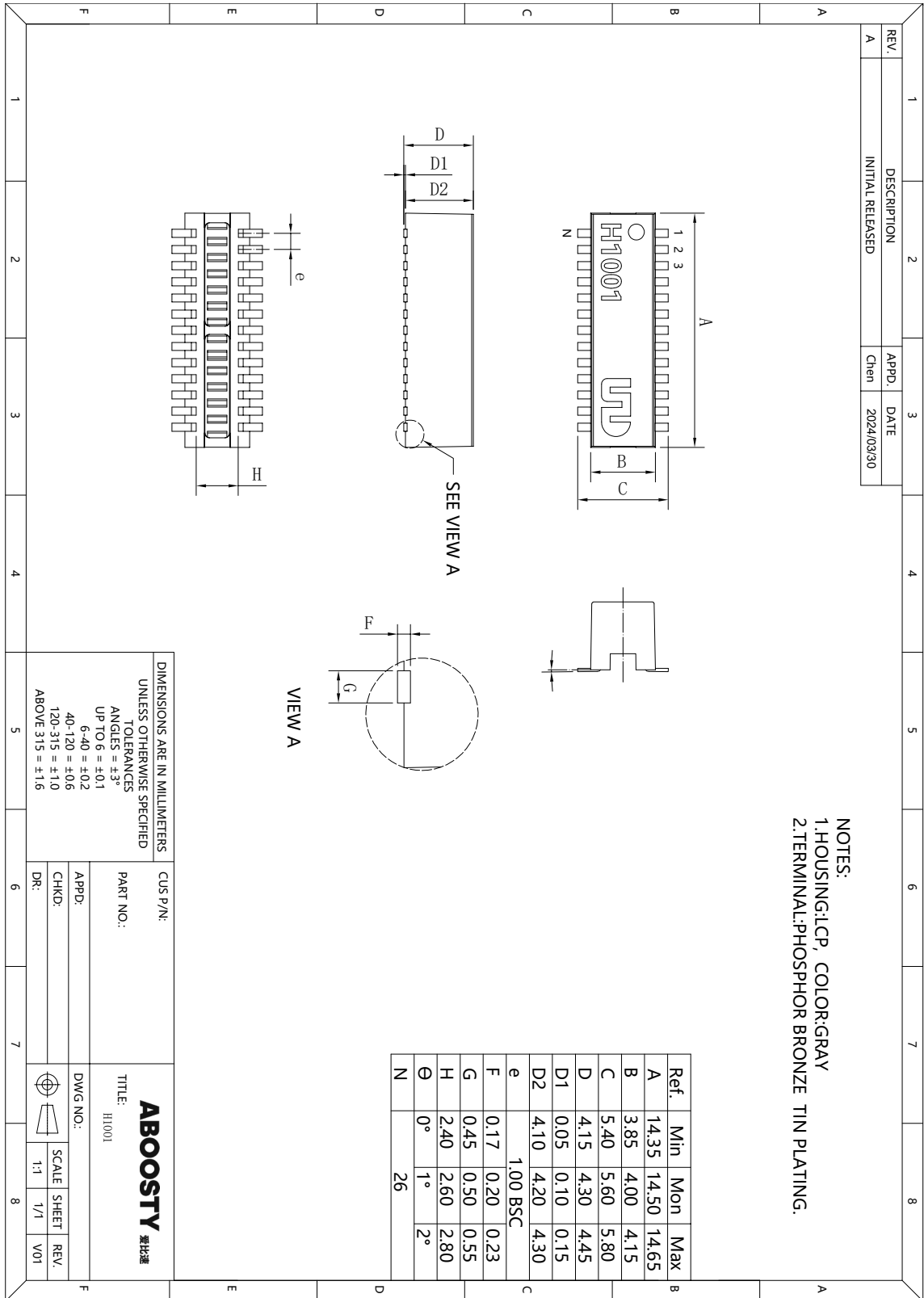
Product Name	H1001 860 to 930 MHz Symmetric Antenna with Multi-Mode Functionality
Part Number	M01-X21506UWB2
Dimensions	14.5 x 5.6 x 4.3 mm
Mounting	SMT
Packaging	Tape & Reel
MOQ	1000 pcs/reel

4 ANTENNA CERTIFICATION

RoHS Approval	Compliant [2011/65/EU&2015/863]
REACH Approval	Conform or declared [(EC)1907/2006]
Hazardous material regulation conformance: A certificate of conformance is available upon request. Feel free to consult us for details.	



5 MECHANICAL DIMENSIONS



6 REFERENCE GUIDE

Technical Features	860-930 MHz
Peak Gain	-0.43dBi
Max Efficiency	52.14%
Input Impedance	50Ω
VSWR	≤4.09
Operating Temperature	-40°C to +85°C
Power Capacity	3W

All data were measured in free space and on a reference ground plane of 80 mm length, 40 mm width, and 1.0 mm thickness. Application data might vary.

7 EVALUATION BOARD WITH THE ANTENNA

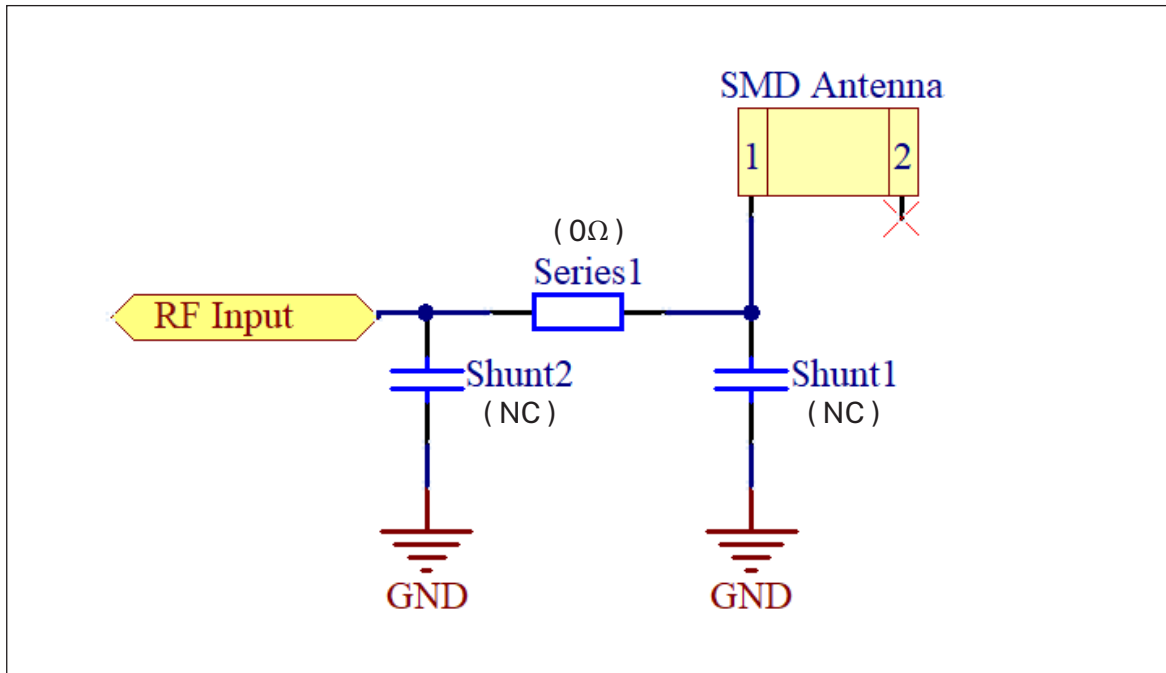
The evaluation board provides operation at 860-928 MHz.

Evaluation Board dimension: 80 x 40 x 1.0 mm

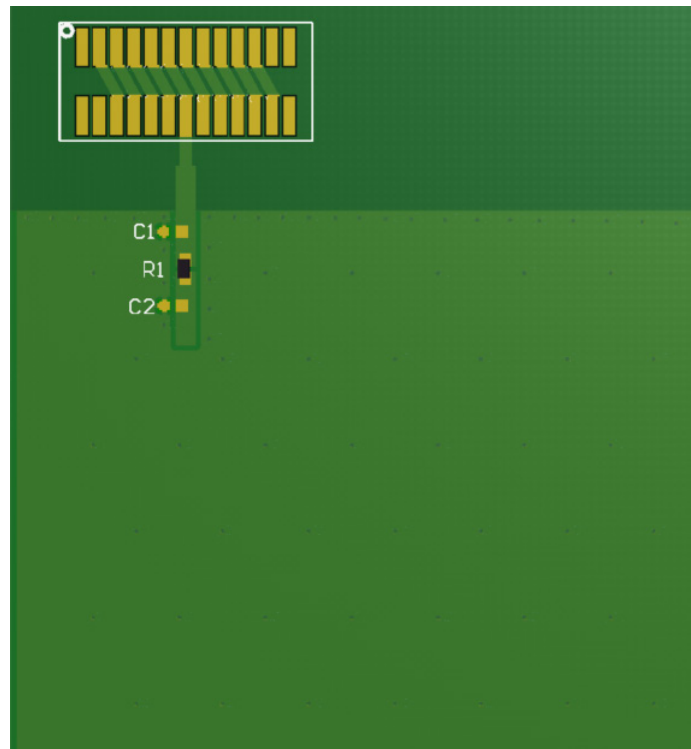


It's strongly recommended to place the antenna near the edge of the board. Maximum antenna performance is achieved by placing the antenna towards one of the corners of the PCB and with the feed point of the antenna as close to same corner of the PCB as possible.

8 MATCHING NETWORK



9 RECOMMENDED LAYOUT

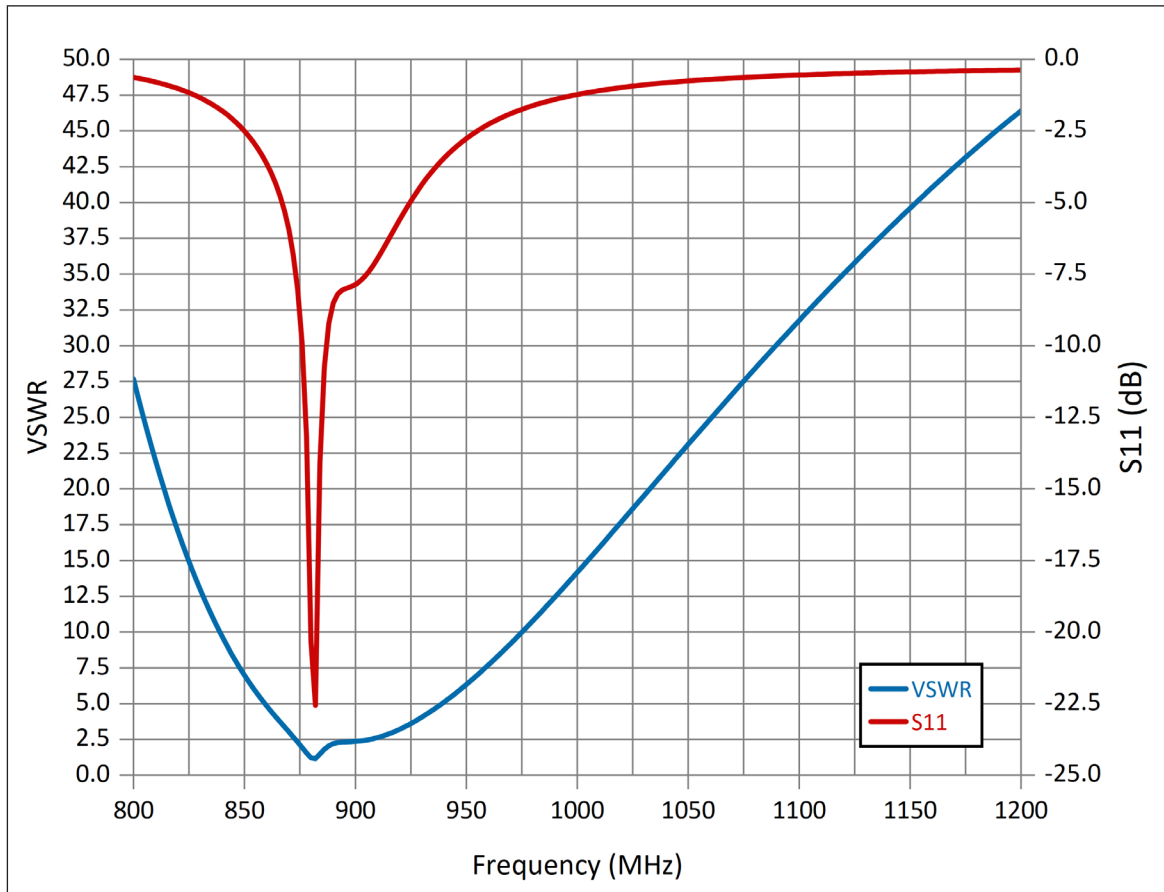


10 ELECTRICAL PERFORMANCE

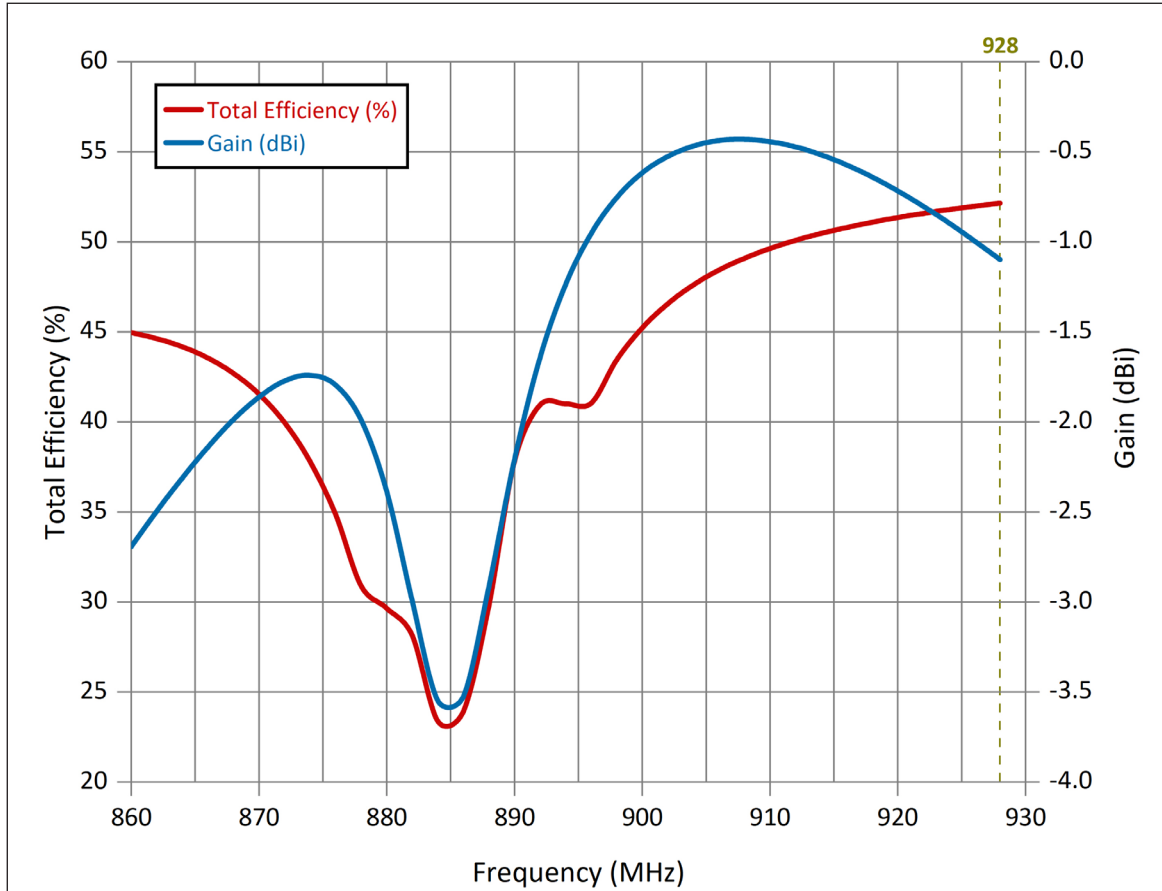
© Note

The data displayed in Chapter 10 were measured in free space and on a reference ground plane of 80 mm length, 40 mm width, and 1.0 mm thickness.

10.1 VSWR and S11 (dB)

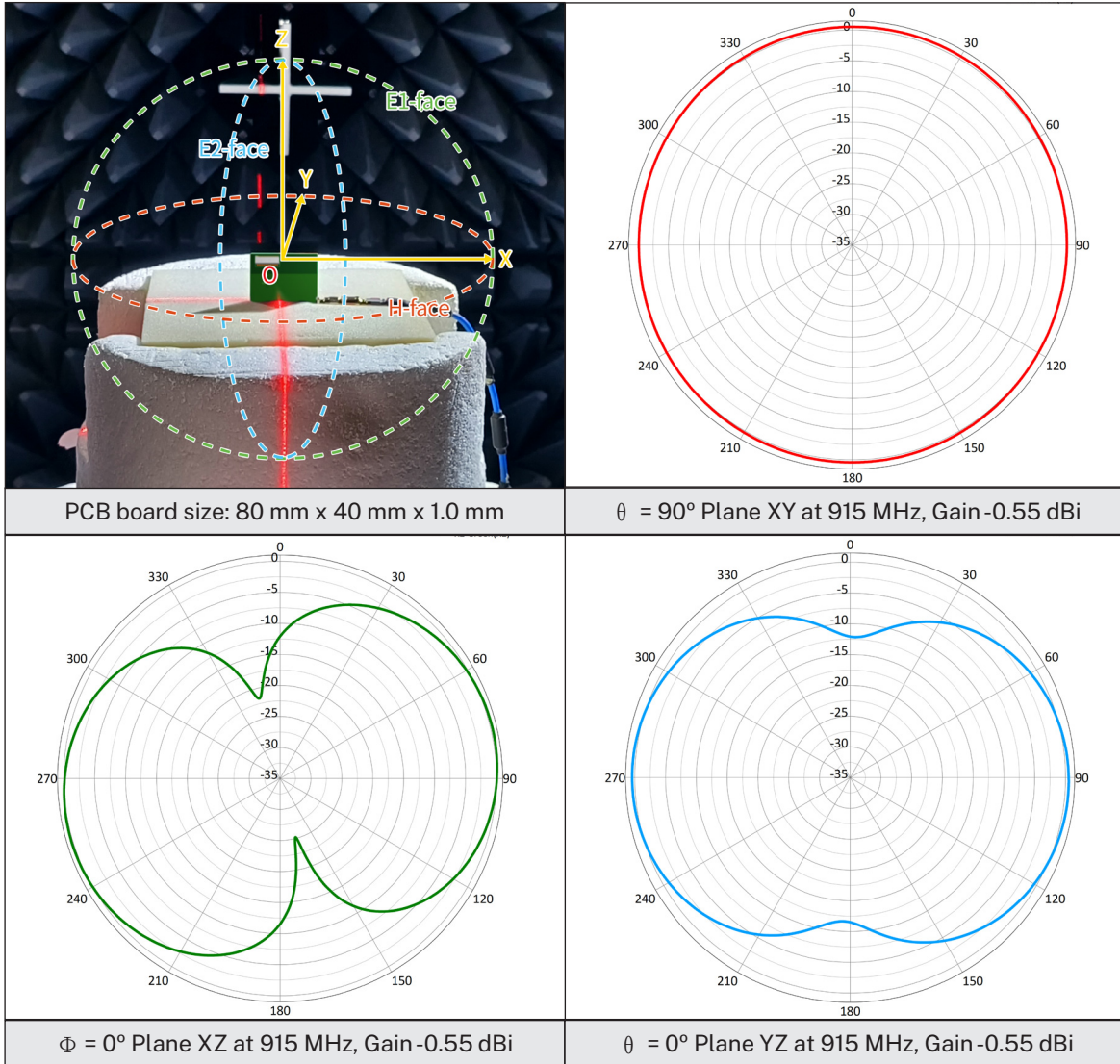


10.2 Gain (dBi) and Total Efficiency (%)



Frequency (MHz)	Efficiency (%)	Gain (dBi)
860	44.95	-2.69
870	41.54	-1.86
880	29.65	-2.38
890	37.82	-2.21
900	45.21	-0.62
910	49.62	-0.44
920	51.34	-0.72
928	52.14	-1.10

10.3 Radiation Patterns (915 MHz)

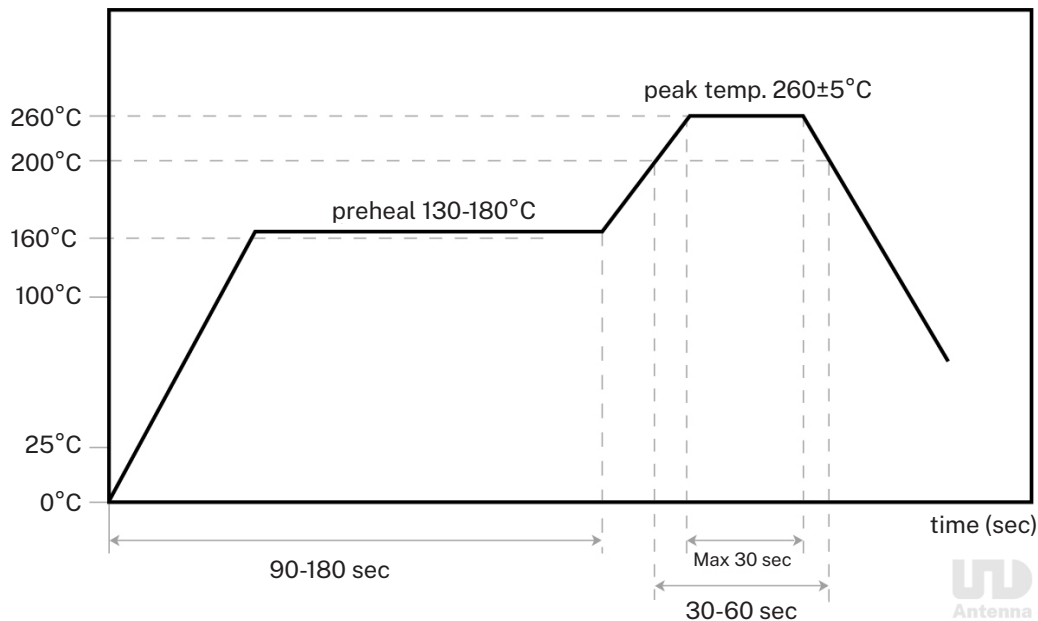


11 SOLDERING CONDITIONS

This antenna is suitable for lead free soldering.

The reflow duration should be adjusted to create good solder joints without raising the antenna temperature beyond the allowed maximum of 260°C.

The figure below shows the temperature profile for soldering.



12 PACKAGING

12.1 Optimal Storage Conditions for Packaged Reels

Temperature	-5°C to 40°C
Humidity	Less than 70% RH
Shelf life	18 months
Storage place	Away from corrosive gas and direct sunlight
Packaging	Reels should be stored in unopened sealed manufacturer's plastic packaging.

© Note

Storage of open reels of antennas is not recommended due to possible oxidation of pads on antennas. If short-term storage is necessary, then it is highly recommended that the bag containing the antenna reel is re-sealed and stored in like storage conditions as in the above table.

12.2 Packagings and Dimensions (Unit: mm)

