

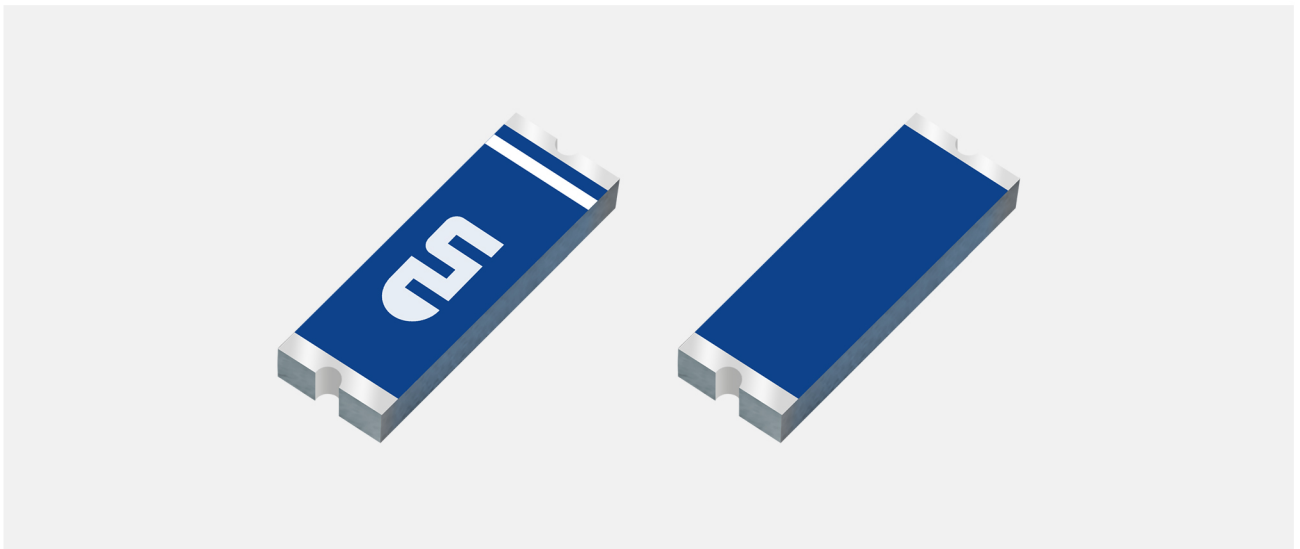
2.4G / 5G WIFI

SMD ANTENNA

 2400-2500MHz | 5200-6000MHz

Dimensions: 8.0 x 3.0 x 1.0 mm

Clearance Area: 14.0 x 40.0 mm



Model: ADWH004





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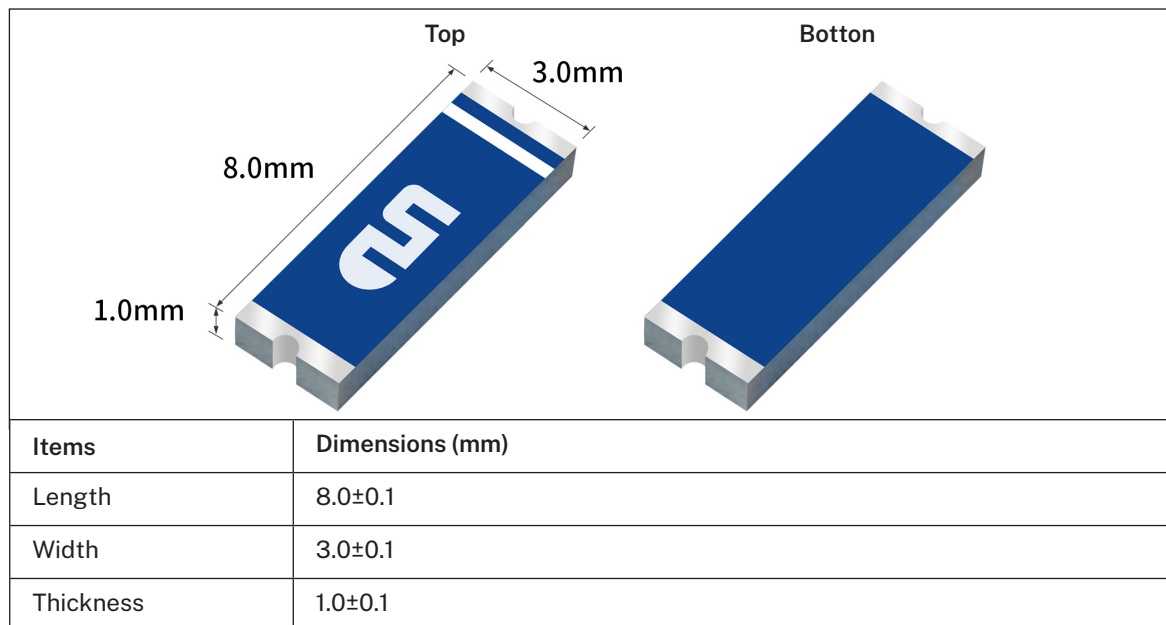


1 FEATURES & BENEFITS

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

2 APPLICATIONS

- Smartphones, tablets, laptops, and notebooks
- Smart home devices like home security systems
- Internet of Things (IoT), wearable devices, E-health devices
- Networking equipment like WiFi routers, WiFi extenders and repeaters
- Asset tracking, point of sale (POS) systems
- Automotive like V2X communication
- Smart city infrastructure like public WiFi hotspots, environmental monitoring



3 ORDER INFORMATION

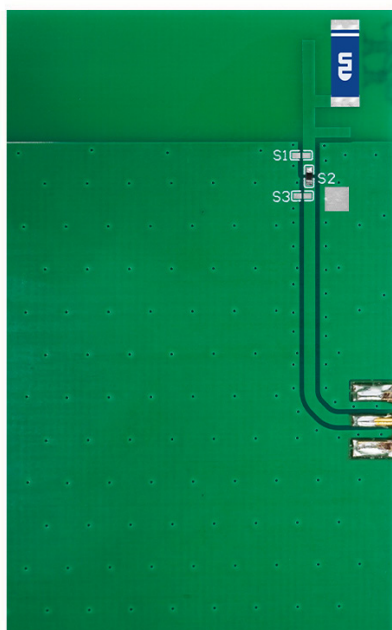
Product Name	2.4G/5G WIFI SMD ANTENNA
Model	ADWH004
Dimensions	8.0 x 3.0 x 1.0 mm
Weight	0.1 g
Mounting	SMT
Packaging	Tape & Reel
MOQ	1500 pcs/reel

4 REFERENCE GUIDE

Technical Features	2400-2500 MHz	5200-6000 MHz
Max VSWR	1.39:1	1.69:1
Max Efficiency	85.03%	
Max Return Loss	-9.4 dB	
Peak Gain	Up to 4.62 dBi (Typ)	
Max Input Power	3 Watts CW	
Polarization	Linear	
Input Impedance	50 Ω	
Operating Temperature	-40°C to +80°C	
Relative Humidity	10 to 70%	
Dimensions (L x W x H)	8.0 x 3.0 x 1.0 mm	
All data were measured in free space and on a reference ground plane of 65 mm length, 40 mm width, and 1.0 mm thickness. Application data might vary.		

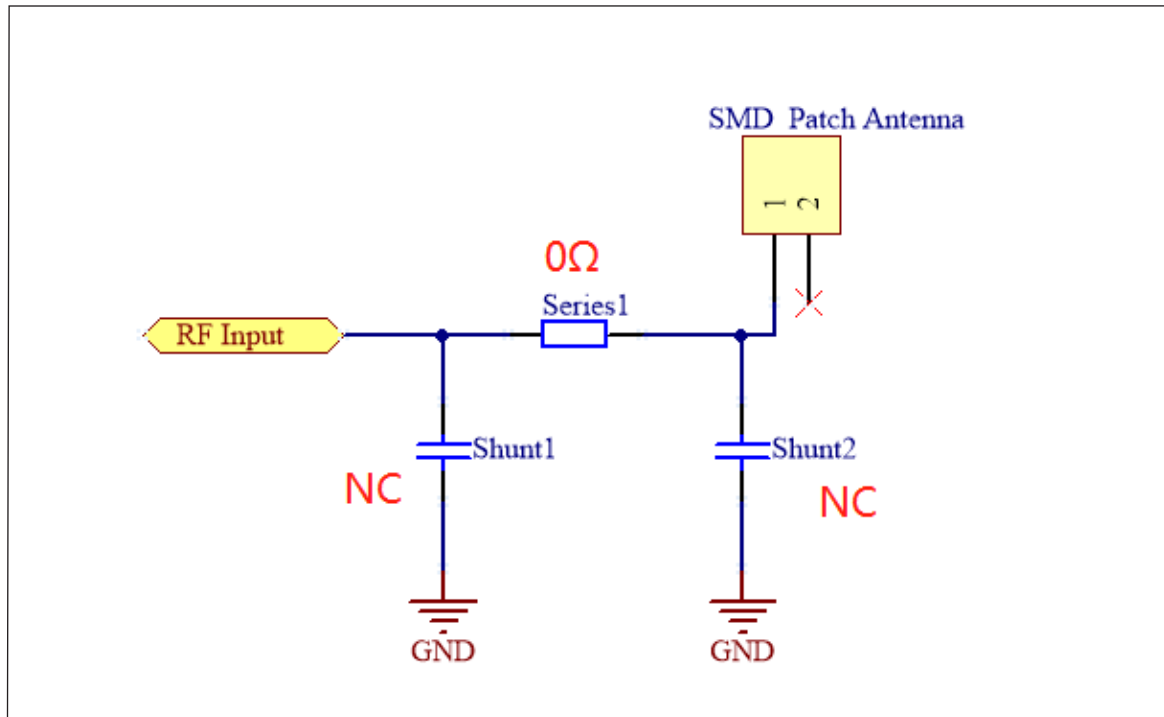
5 EVALUATION BOARD WITH ANTENNA

The evaluation board provides operation at 2400-2500 MHz, 5200-6000 MHz.
Evaluation Board dimension: 65.0 x 40.0 x 1.0 mm

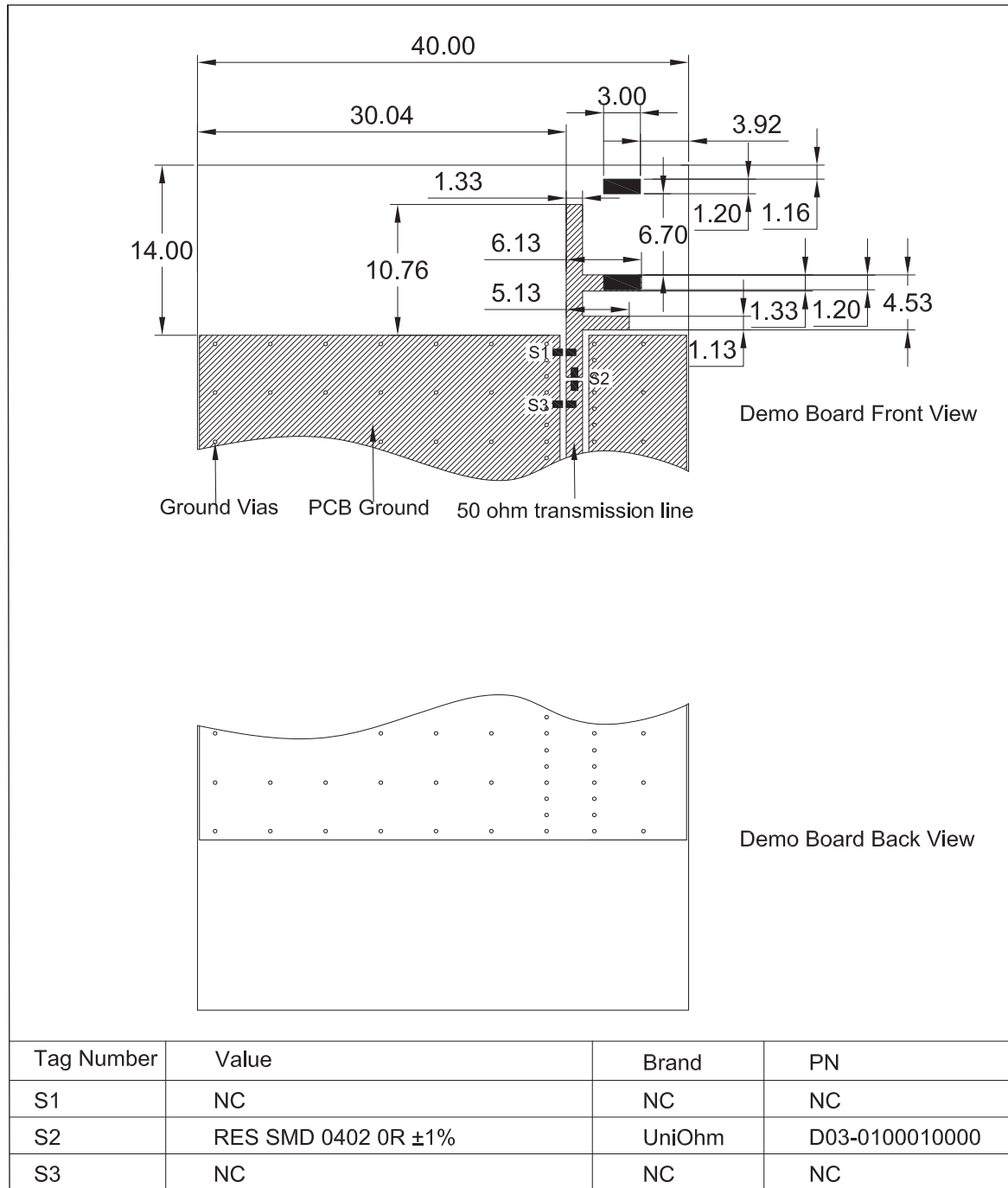


Clearance Area: 14.0 X 40.0 mm

6 MATCHING NETWORK



7 RECOMMENDED FOOTPRINT AND LAYOUT

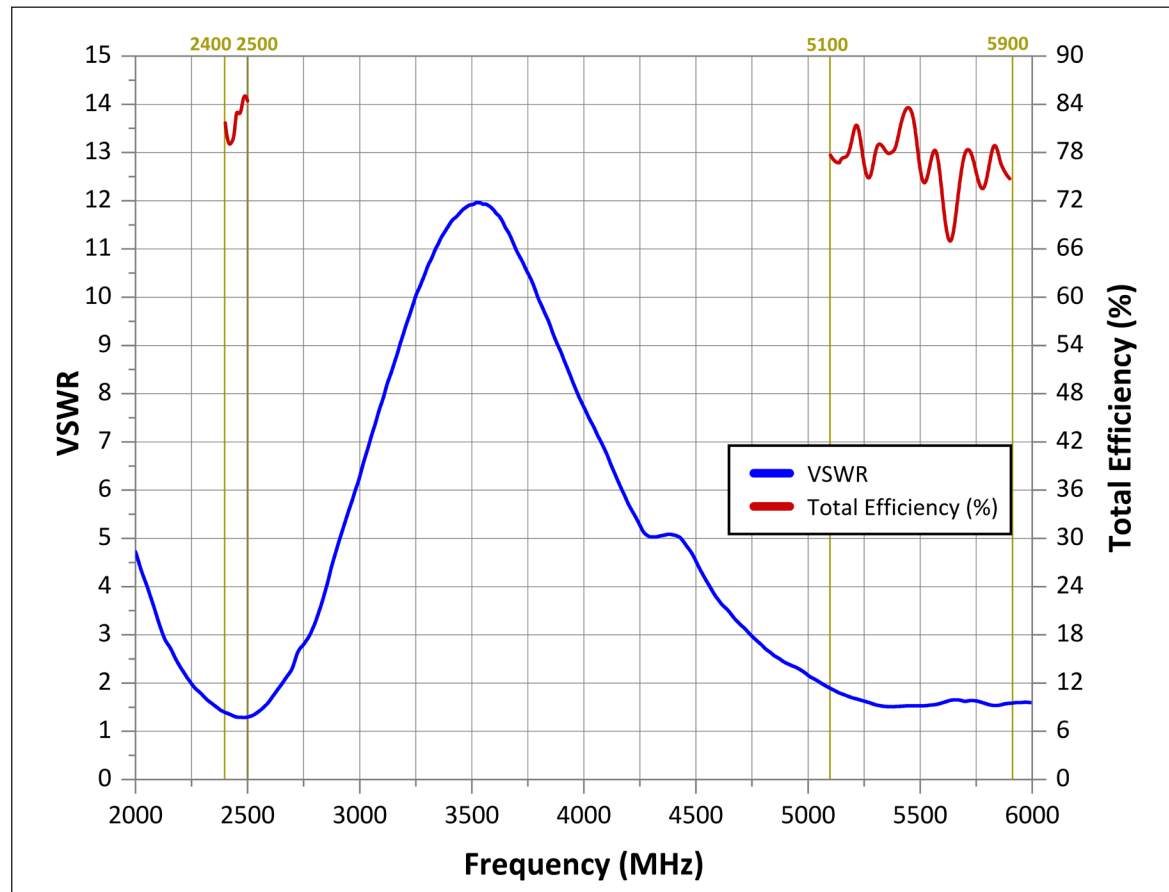


8 ELECTRICAL PERFORMANCE

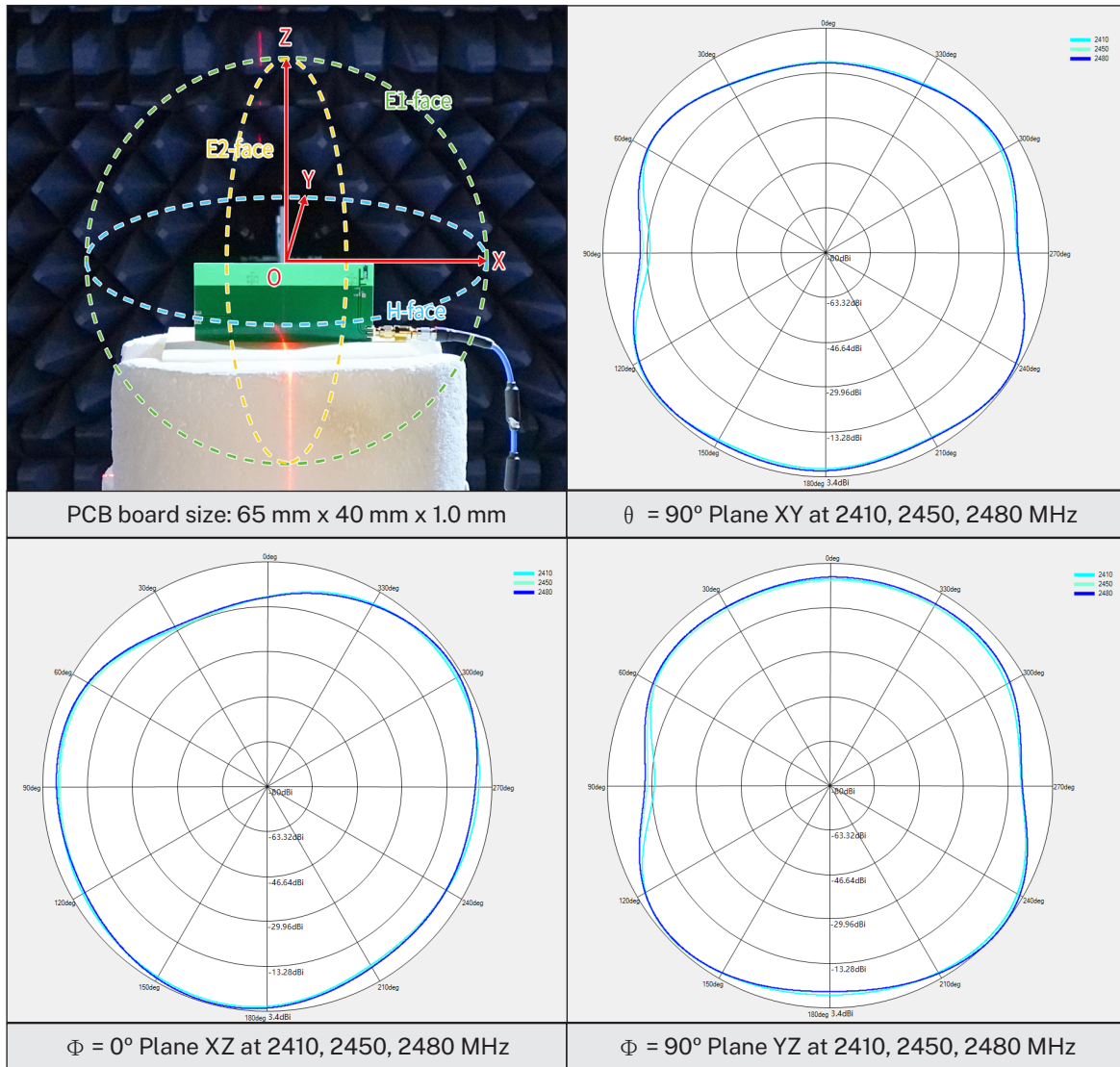
© Note

All data displayed in Chapter 8 were measured in free space and on a reference ground plane of 65 mm length, 40 mm width, and 1.0 mm thickness.

8.1 VSWR and Total Efficiency

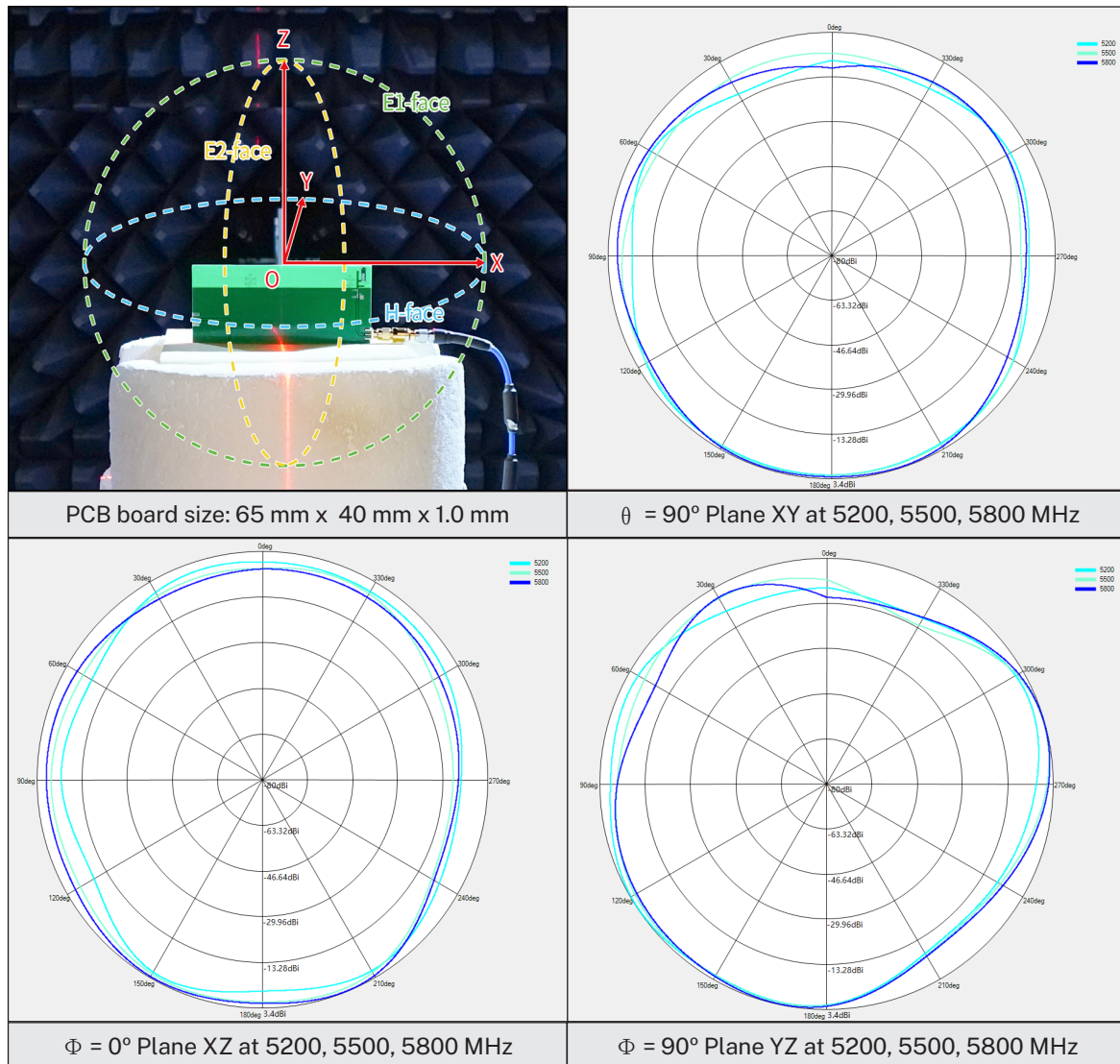


8.2 Radiation Patterns (2.4-2.5 GHz), Efficiency (%) and Gain (dBi)



Gain	Peak Gain	3.35 dBi
	Average Gain across the band	3.16 dBi
	Gain Range across the band (min, max)	2.92 to 3.35 dBi
Efficiency	Peak Efficiency	85.03%
	Average Efficiency across the band	82.09%
	Efficiency Range across the band (min, max)	79.06 to 85.03%

8.3 Radiation Patterns (5.2-5.8 GHz), Efficiency (%) and Gain (dBi)



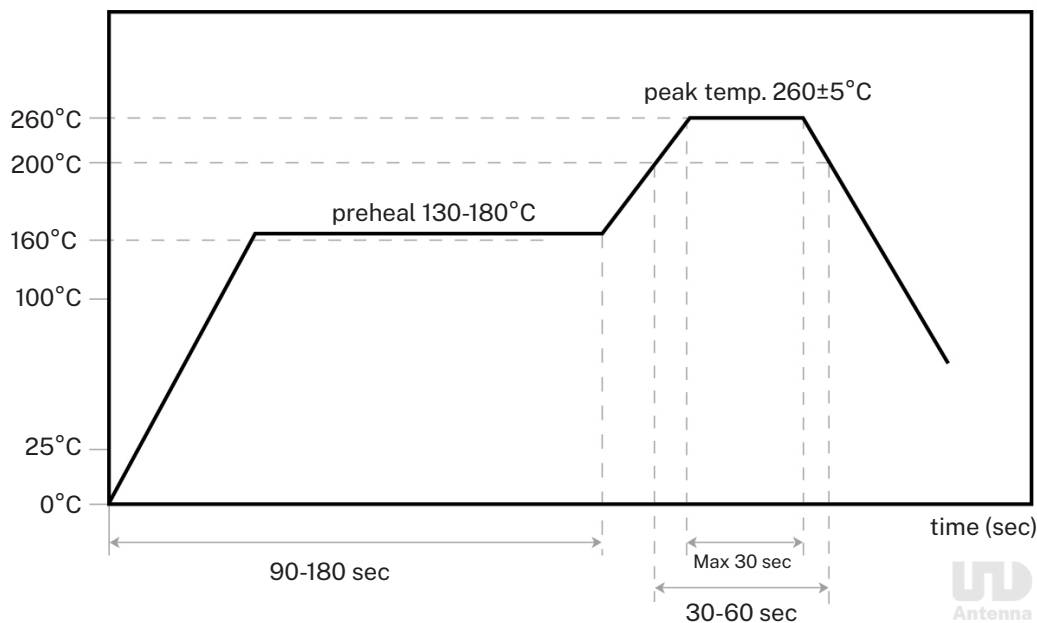
Gain	Peak Gain	4.62 dBi
	Average Gain across the band	3.59 dBi
	Gain Range across the band (min, max)	2.63-4.62 dBi
Efficiency	Peak Efficiency	83.85%
	Average Efficiency across the band	76.81%
	Efficiency Range across the band (min, max)	67.18 to 83.85%

9 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.



10 PACKAGING

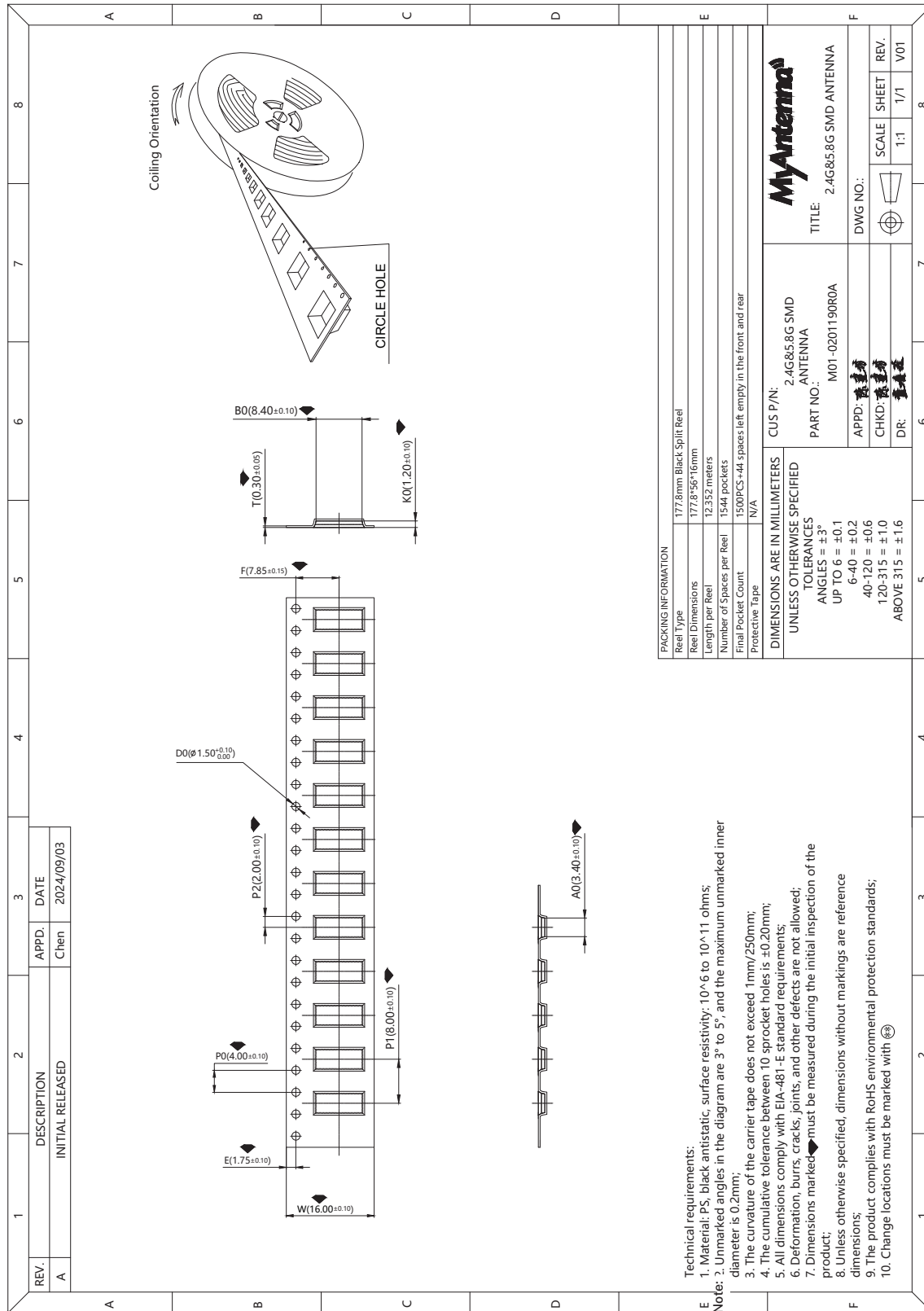
10.1 Optimal Storage Conditions for Packaged Reels

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.

10.2 Packagings and Dimensions (Unit: mm)





11 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.	



12 WELCOME ALL ANTENNA OEM/ODM PROJECTS

About ABOOSTY



10+ years in antenna R&D, production, and OEM/ODM



House of Aboosty: 1M+ units annual output capacity



Factory directly competitive price



Industry-leading quality levels



Professional team-work & support



Quick price and lead time estimation

Why Choose ABOOSTY



Innovative and patented design solutions



Full terminal devices anechoic chamber test



Co-location with its custom



Competitive price



Strict inspection



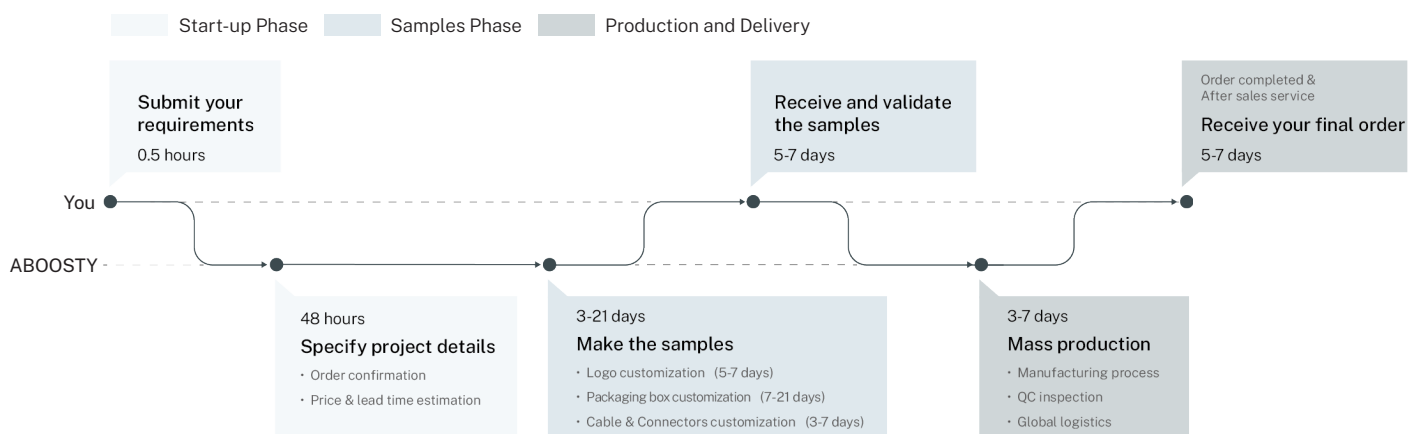
Prompt reply within 24h

What We Provide

OEM/ODM Services	
Light Customization	Deep Customization
• Logo • Packaging • Cables&Connectors	• In-depth tailoring for specific applications • Functional enhancements • Environmental adaptations • Vertical certifications • ...

Custom Process

Light Customization Process



Deep Customization Process

