



HL GLOBAL

PRELIMINARY ENGINEERING DATASHEET

00-3601022800

**HL GLOBAL
850 NEW BURTON ROAD.
SUITE 201, DOVER, DE 19904
UNITED STATES OF AMERICA**

INFORMATION: info@hlglobalcorp.com



Datasheet Revision History

Revision	Date	Change Log
00-36010228/ Rev.1	04/26/2021	Preliminary Datasheet 1.0

Disclaimer

The information in this document is provided for a specific HL Global product and is proprietary and confidential. HL Global reserves the right to make changes at any time, without notice. HL Global reserves all rights to this document and the information contained herein. Reproduction or disclosure of the document to third parties without express permission is strictly prohibited. Please kindly confirm antenna product details with HL Global before finalizing your product design.



Table of Contents

- 1. Antenna Product Description4
- 2. Features Overview4
- 3. Product Photographs5
- 4. Antenna Specification Summary6
- 5. Principal Product Dimensions7
- 6. Return Loss8
- 7. Radiation Pattern Characteristics.....9
- 8. Realized Efficiency and Peak Realized Gain 11
- 9. Assembly Drawing 13

Figures

- Figure 1. Photo of HL Global antenna 00-3601022800.5
- Figure 2. Basic dimensions and tolerances of 00-3601022800 antenna.....7
- Figure 3. Measured Return Loss of 00-3601022800.8
- Figure 4. 00-3601022800 antenna for radiation pattern measurements. Coordinate system used for radiation pattern visualization.....9
- Figure 5. Measured radiation pattern characteristics in principal planes at 2.4GHz.....10
- Figure 6. Measured radiation pattern characteristics in principal planes at 5GHz.....10
- Figure 7.Measured peak realized gain over frequency.11
- Figure 8.Assembly Drawing.13

Tables

- Table 1. 00-3601022800 antenna specification summary.6
- Table 2.Summary of realized efficiency and peak realized gain results.....12



1. Antenna Product Description

00-3601022800 Embedded Antenna features FPC antenna supporting both 2.4GHz & 5GHz bands for WLAN, off-board, cable-fed antenna, Balanced type antenna.

2. Features Overview

00-3601022800 Embedded Antenna features

- Covering both 2.4GHz & 5GHz freq
- Superior performance
- Off-board, low profile design
- 2.3dBi @2450MHz, 4.2dBi @5500MHz
- Low Cost, High performance



3. Product Photographs



Figure 1. Photo of HL Global antenna 00-3601022800.



4. Antenna Specification Summary

Wireless Standard	IEEE 802.11a /b/g/n/ac
Frequency Range	2.4GHz & 5GHz
Peak Realized Gain(Max)	2.3dBi @2400MHz, 4.2dBi @5500MHz
Realized Efficiency	38% @2400MHz, 48% @5500MHz
Return Loss	> 10dB
Polarization	Linear Polarization
Axial Ratio	/
Radiation Pattern	Omni-directional
Feed Impedance	50Ω
Power Handling	30dBm
Antenna Structure	FPC antenna
Feeding Description	Cable Feeding
Antenna Dimensions	55.0*12.5*2.0(mm)
Weight	0.4g
Temperature Range	Operating temperature: -40° C to +75° C (-40° F to +167° F) Storage temperature: -40° C to +85° C (-40° F to +185° F)

Table 1. 00-3601022800 antenna specification summary.

5. Principal Dimensions

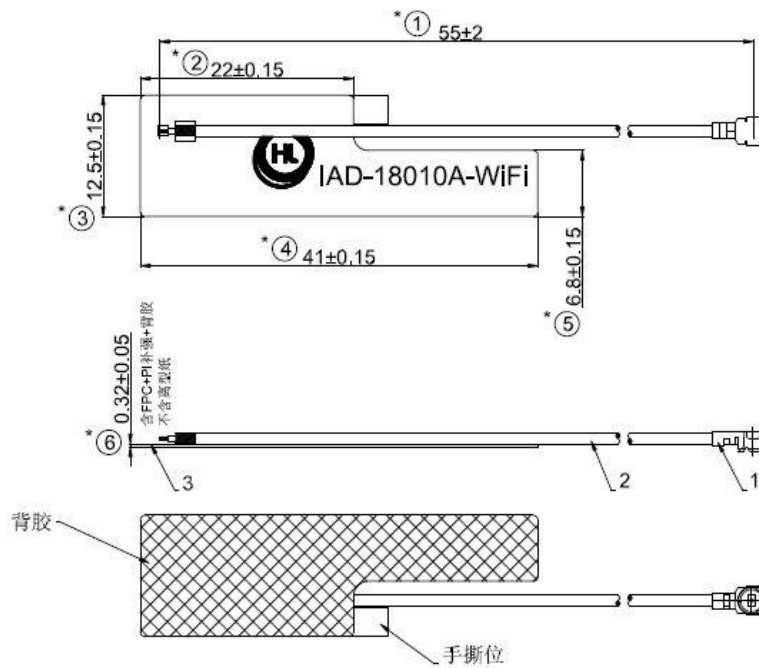


Figure 2. Basic dimensions and tolerances of 00-3601022800.



6. Return Loss

Return Loss (RL) was measured by using Keysight E5071C Vector Network Analyzer (VNA).

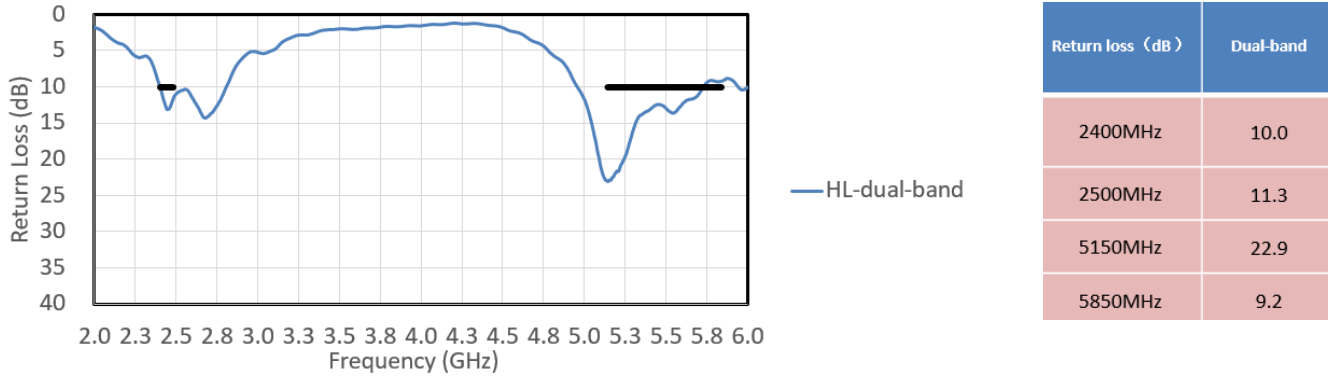


Figure 3. Measured Return Loss of 00-3601022800.



7. Radiation Pattern Characteristics

Radiation characteristics for 00-3601022800 were measured by using Satimo SG24L anechoic chamber.

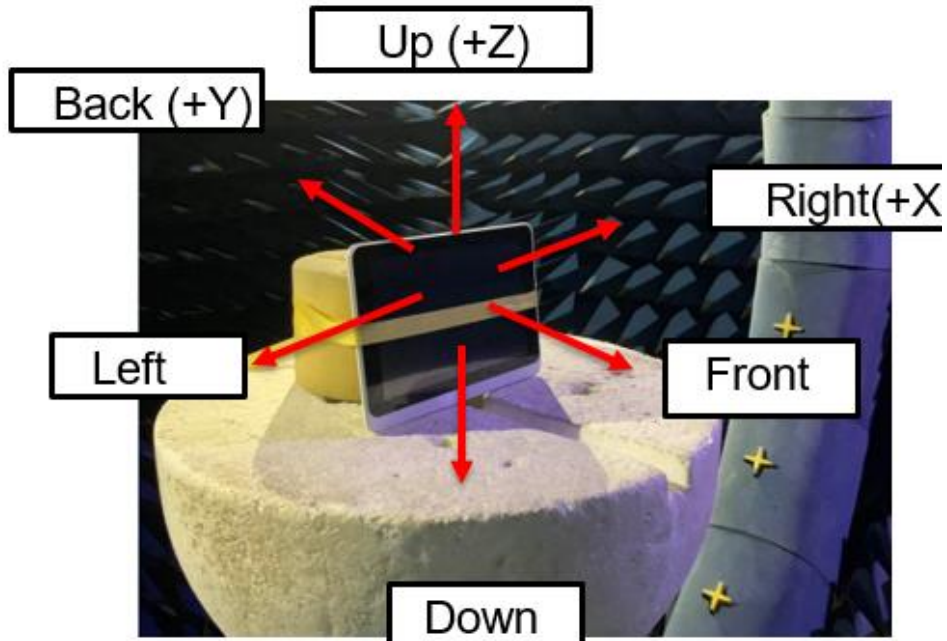


Figure 4. 00-3601022800 antenna for radiation pattern measurements. Coordinate system used for radiation pattern visualization.

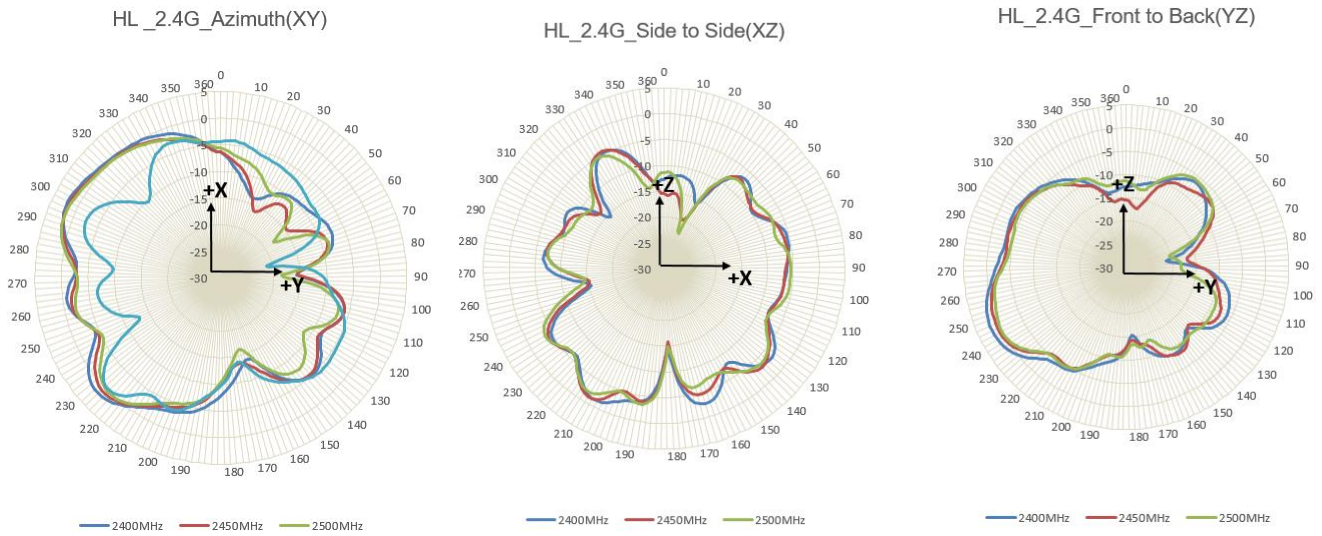


Figure 5. Measured radiation pattern characteristics in principal planes at 2.4GHz.

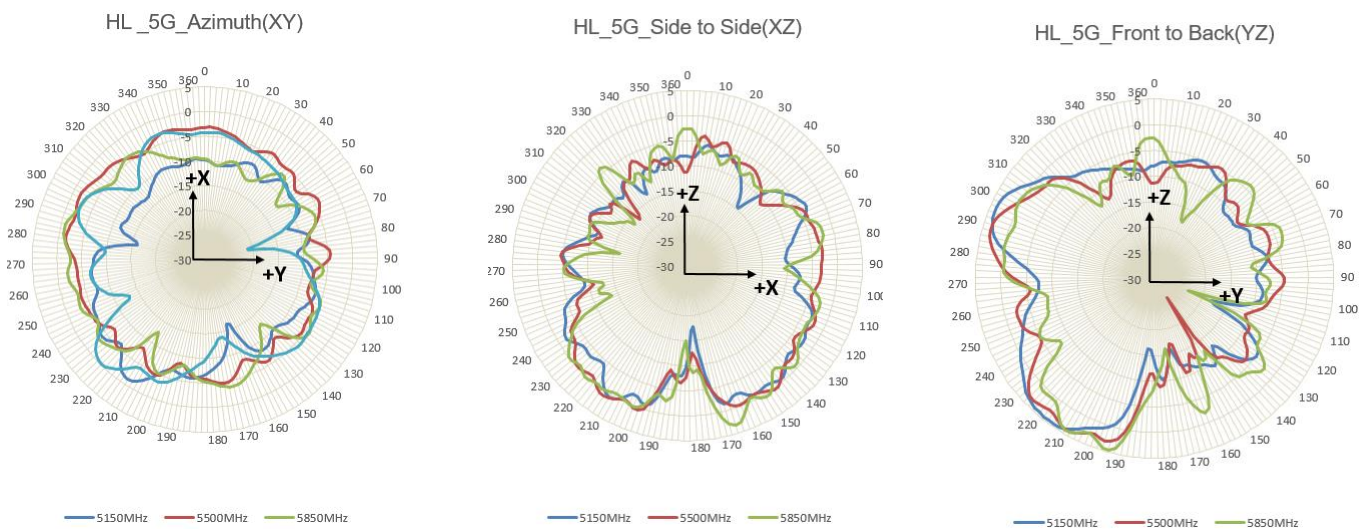


Figure 6. Measured radiation pattern characteristics in principal planes at 5GHz.



8. Realized Efficiency and Peak Realized Gain

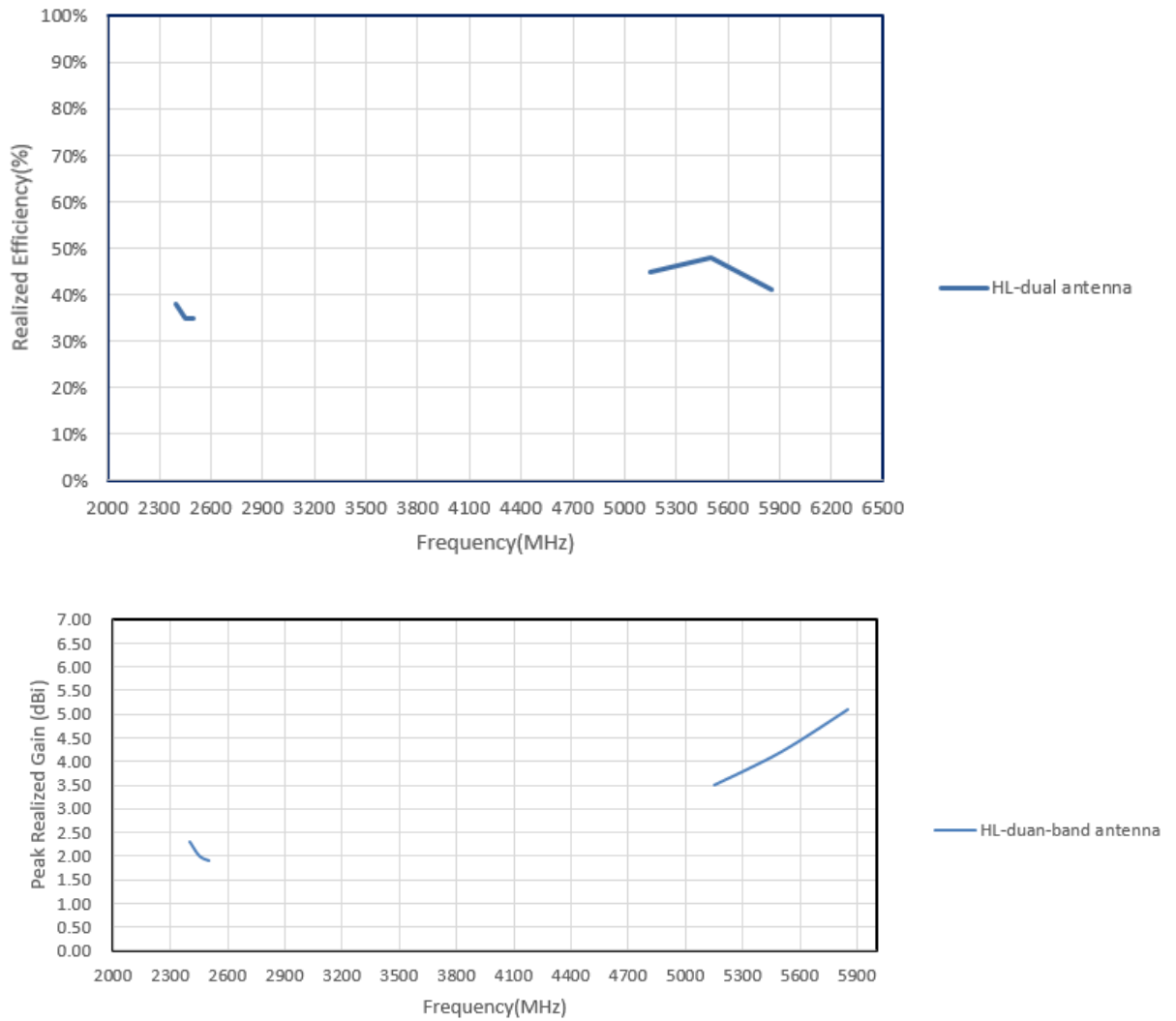


Figure 7. Measured peak realized gain over frequency.



Frequency (MHz)	Realized Efficiency (%)	Peak Realized Gain (dBi)
2400	38%	2.3
2450	35%	2.0
2500	35%	1.9
5150	45%	3.5
5500	48%	4.2
5850	41%	5.1
Average	40%	3.2

Table 2.Summary of realized efficiency and peak realized gain results.



9. Assembly Drawing

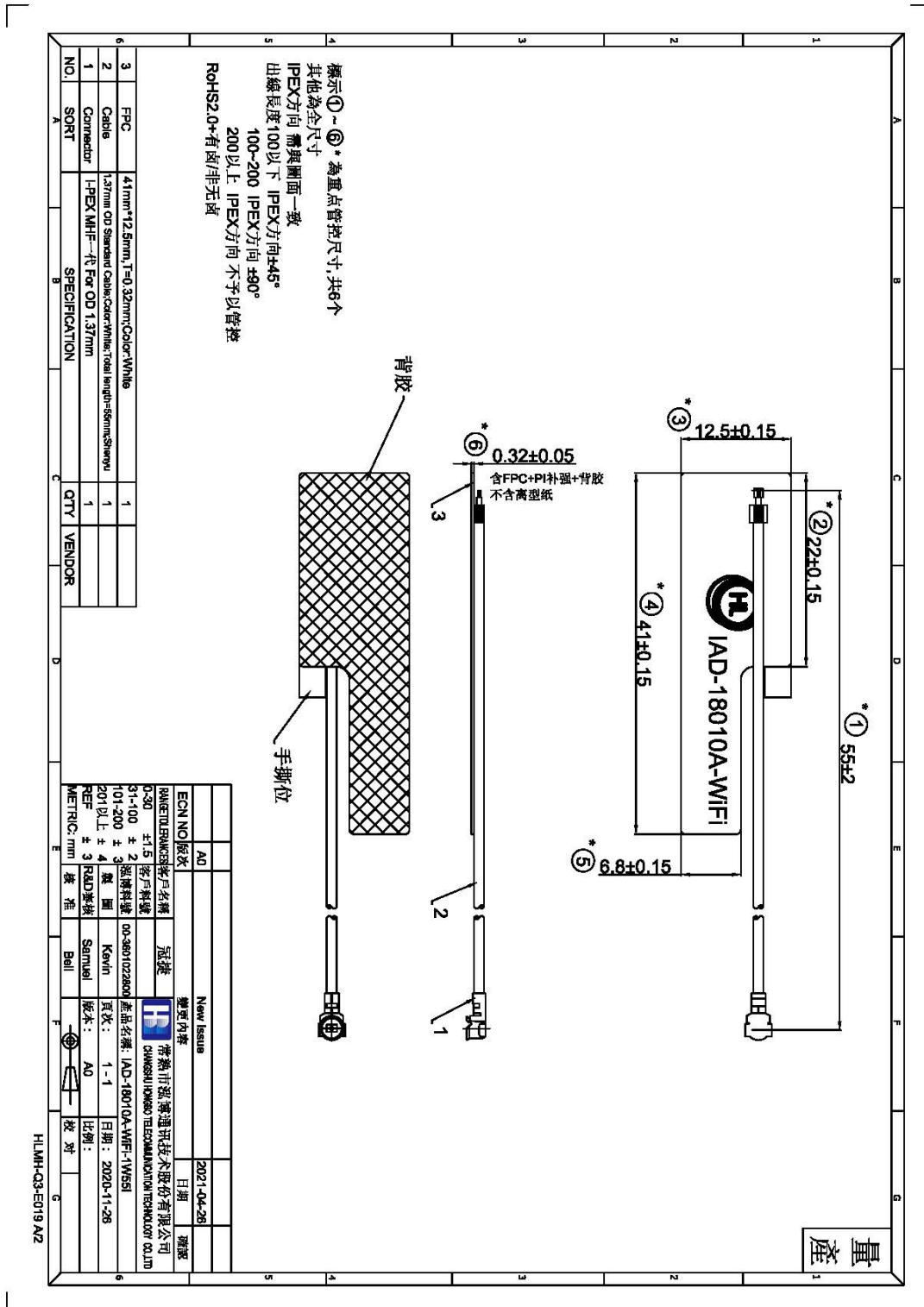


Figure 8. Assembly Drawing.