



HL GLOBAL

PRELIMINARY ENGINEERING DATASHEET

PC65WOC05AS-PB-W35F

**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
PC65WOC05AS-PB-W35F/ Rev.01	18 th /Mar/2022	Preliminary Datasheet 1.0

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Table of Contents

- 1. Antenna Product Description 4
- 2. Features Overview 4
- 3. Product Photographs 4
- 4. Antenna Specification Summary 5
- 5. Principal Dimensions 6
- 6. Return Loss 6
- 7. Radiation Pattern Characteristics 7
- 8. Realized Efficiency and Peak Realized Gain 9
- 9. Assembly Drawing 11

Figures

- Figure 1. Photo of HL Global antenna PC65WOC05AS-PB-W35F.....4
- Figure 2. Basic dimensions and tolerances of PC65WOC05AS-PB-W35F antenna.6
- Figure 3. Measured Return Loss of PC65WOC05AS-PB-W35F.....6
- Figure 4. PC65WOC05AS-PB-W35F antenna for radiation pattern measurements. Coordinate system used for radiation pattern visualization.7
- Figure 5. Measured radiation pattern characteristics in principal planes at 5925MHz.....7
- Figure 6. Measured radiation pattern characteristics in principal planes at 6525MHz.....8
- Figure 7. Measured radiation pattern characteristics in principal planes at 7125MHz.....8
- Figure 8. Measured Realized Efficiency over frequency.9
- Figure 9. Measured Peak Realized gain over frequency.9
- Figure 10. Assembly Drawing.11

Tables

- Table 1. PC65WOC05AS-PB-W35F antenna specification summary.....5
- Table 2. Summary of Peak Realized Gain and Realized Efficiency results.....10



1. Antenna Product Description

PC65WOC05AS-PB-W35F Embedded Antenna features provides a high performance, off-board and cable feeding antenna solution. It was designed for supporting 5925-7125MHz bands applications including WiFi 6E.

2. Features Overview

PC65WOC05AS-PB-W35F Embedded Antenna features

- Covering 5925-7125MHz freq
- Superior performance
- Off-board, low profile design
- 4.6dBi@6375MHz
- Low Cost, High performance

3. Product Photographs

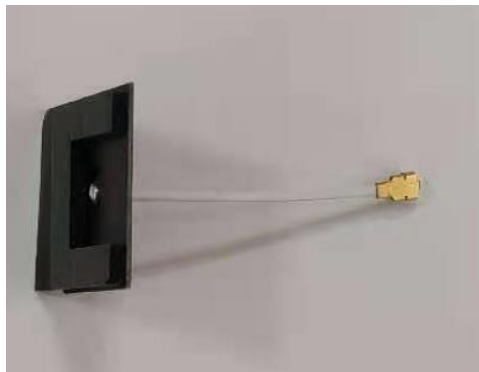


Figure 1. Photo of HL Global antenna PC65WOC05AS-PB-W35F.



4. Antenna Specification Summary

Wireless Standard	WiFi 6E
Frequency Range	5925-7125MHz
Peak Realized Gain(Max)	4.6dBi@6375MHz
Realized Efficiency	76%@6375MHz
Return Loss	>10dB
Polarization	Linear Polarization
Axial Ratio	/
Radiation Pattern	Omni-directional
Feed Impedance	50Ω
Power Handling	30dBm
Antenna Structure	PCB
Feeding Description	Cable Feeding
Antenna Dimensions	20*20*0.6(mm)
Weight	0.73g
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. PC65WOC05AS-PB-W35F antenna specification summary.



5. Principal Dimensions

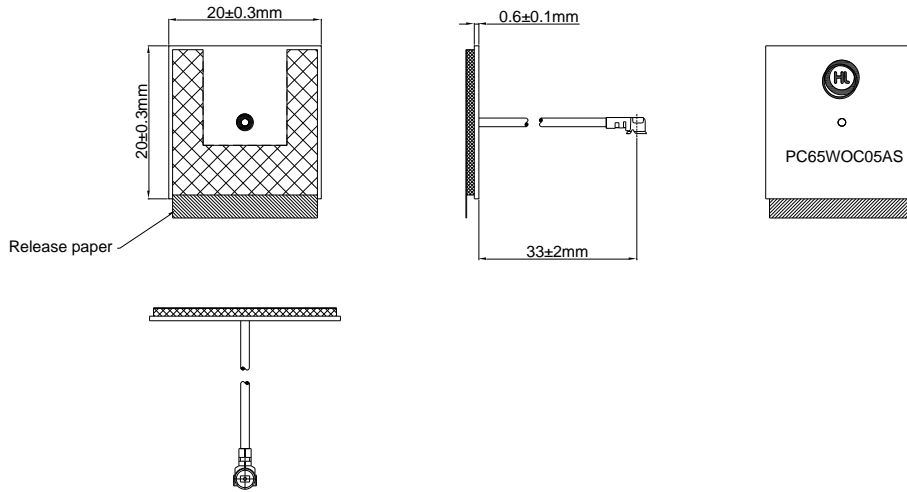
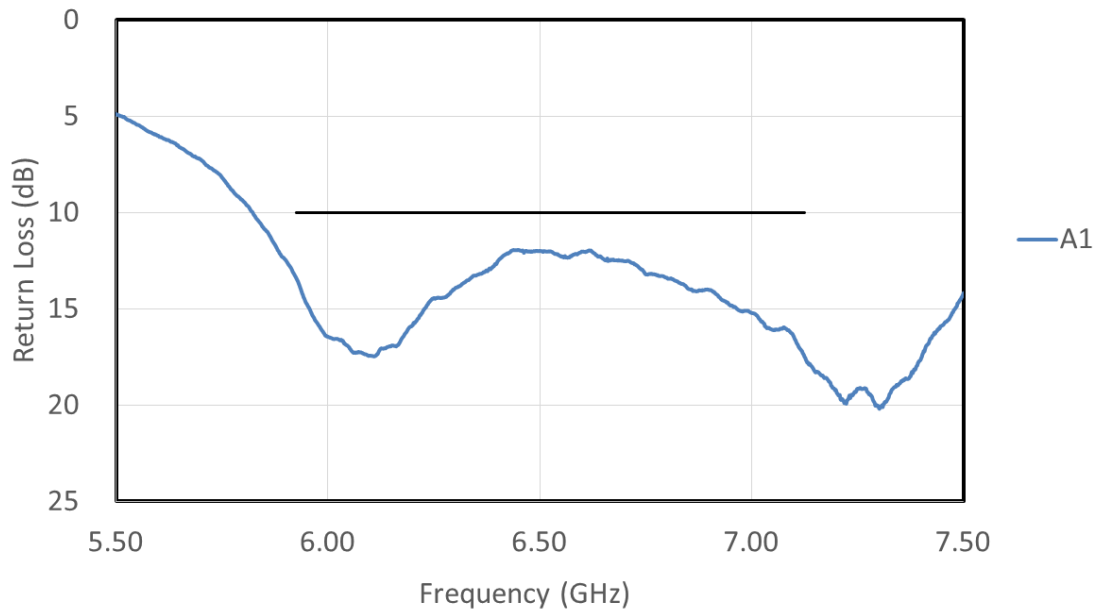


Figure 2. Basic dimensions and tolerances of PC65WOC05AS-PB-W35F antenna.

6. Return Loss

Return Loss (RL) were measured using Keysight E5071B Vector Network Analyzer (VNA).



Return loss (dB)	A1
5925MHz	13.4
6525MHz	12.0
7125MHz	17.5

Figure 3. Measured Return Loss of PC65WOC05AS-PB-W35F.



7. Radiation Pattern Characteristics

Radiation characteristics for PC65WOC05AS-PB-W35F were measured on abs board in Satimo SG24L anechoic chamber.

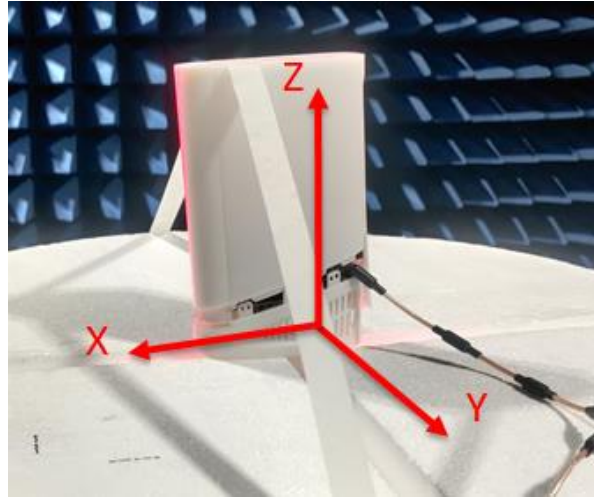


Figure 4. PC65WOC05AS-PB-W35F antenna for radiation pattern measurements. Coordinate system used for radiation pattern visualization.

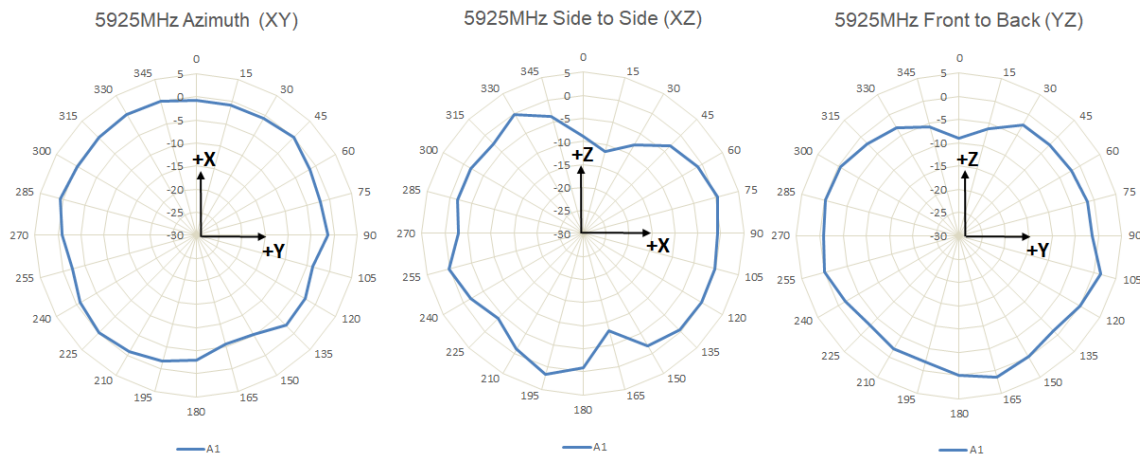


Figure 5. Measured radiation pattern characteristics in principal planes at 5925MHz.

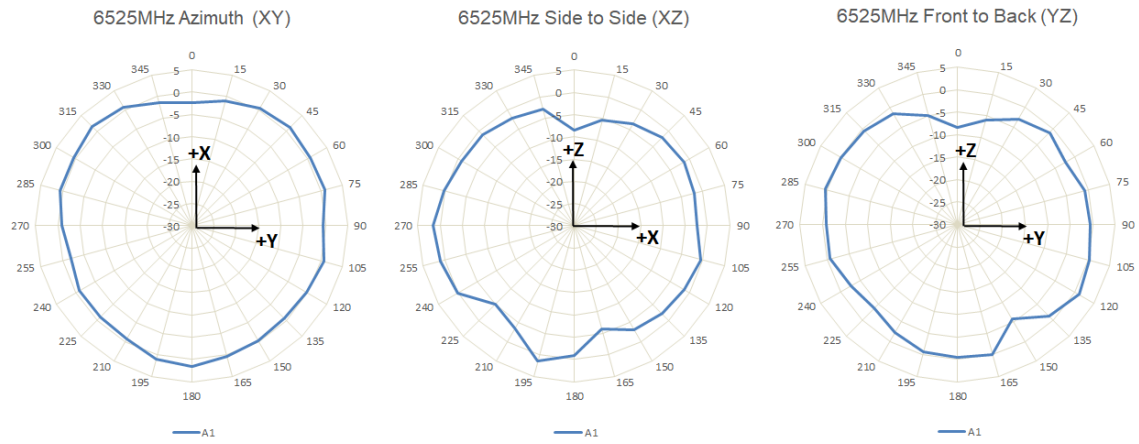


Figure 6. Measured radiation pattern characteristics in principal planes at 6525MHz.

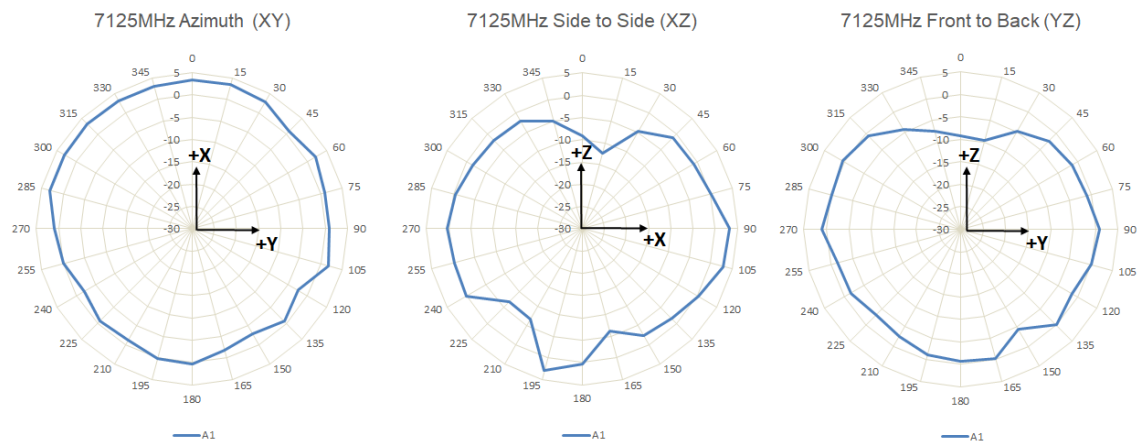


Figure 7. Measured radiation pattern characteristics in principal planes at 7125MHz.



8. Realized Efficiency and Peak Realized Gain

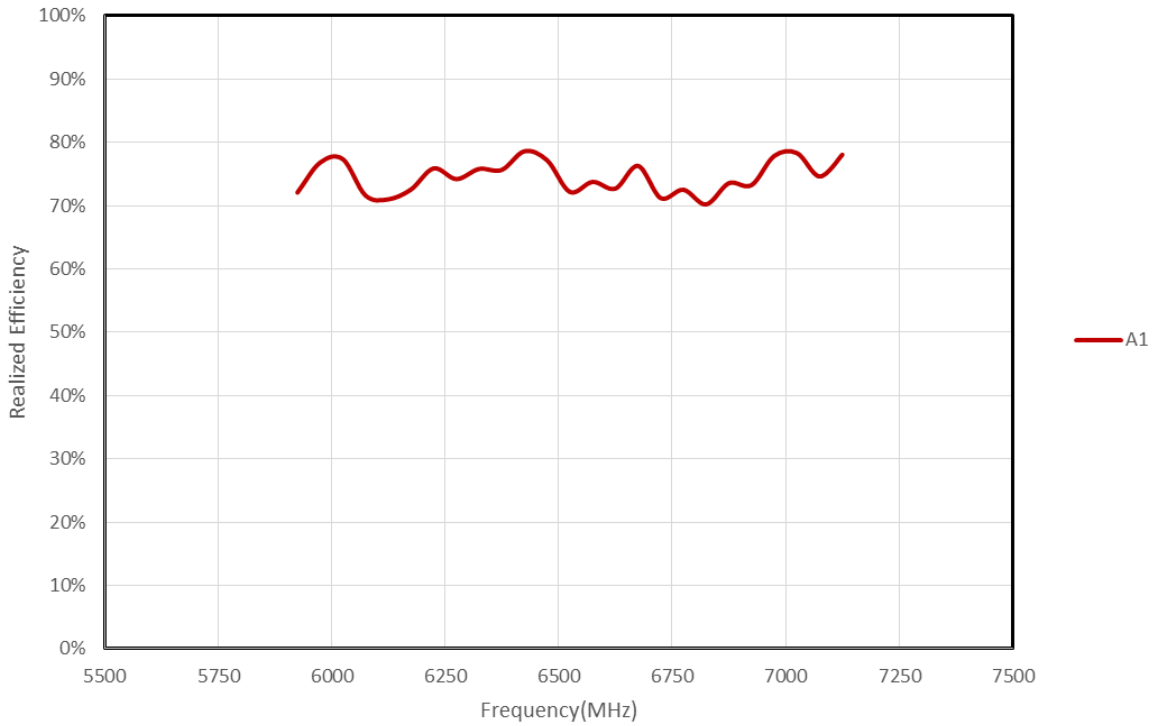


Figure 8. Measured Realized Efficiency over frequency.

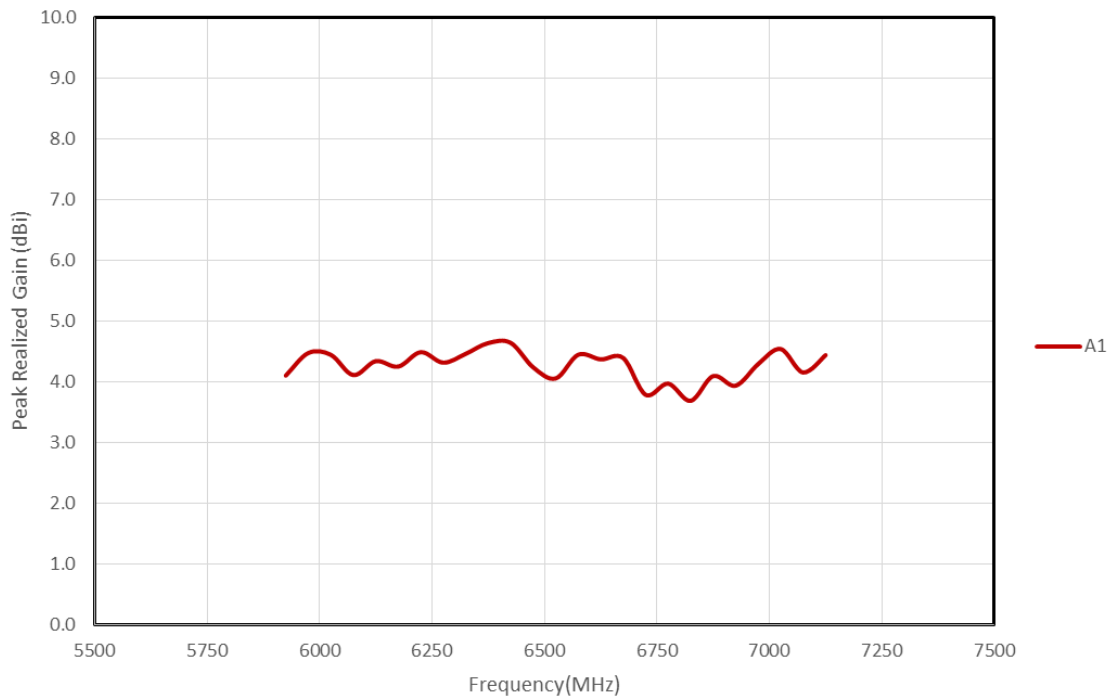


Figure 9. Measured Peak Realized gain over frequency.



Frequency(MHz)	Realized Efficiency	Peak Realized Gain(dBi)
5925	72%	4.1
5975	77%	4.5
6025	77%	4.5
6075	72%	4.1
6125	71%	4.3
6175	73%	4.3
6225	76%	4.5
6275	74%	4.3
6325	76%	4.5
6375	76%	4.6
6425	79%	4.6
6475	77%	4.2
6525	72%	4.1
6575	74%	4.5
6625	73%	4.4
6675	76%	4.4
6725	71%	3.8
6775	73%	4.0
6825	70%	3.7
6875	74%	4.1
6925	73%	3.9
6975	78%	4.3
7025	78%	4.5
7075	75%	4.2
7125	78%	4.4

Table 2.Summary of Peak Realized Gain and Realized Efficiency results.



9. Assembly Drawing

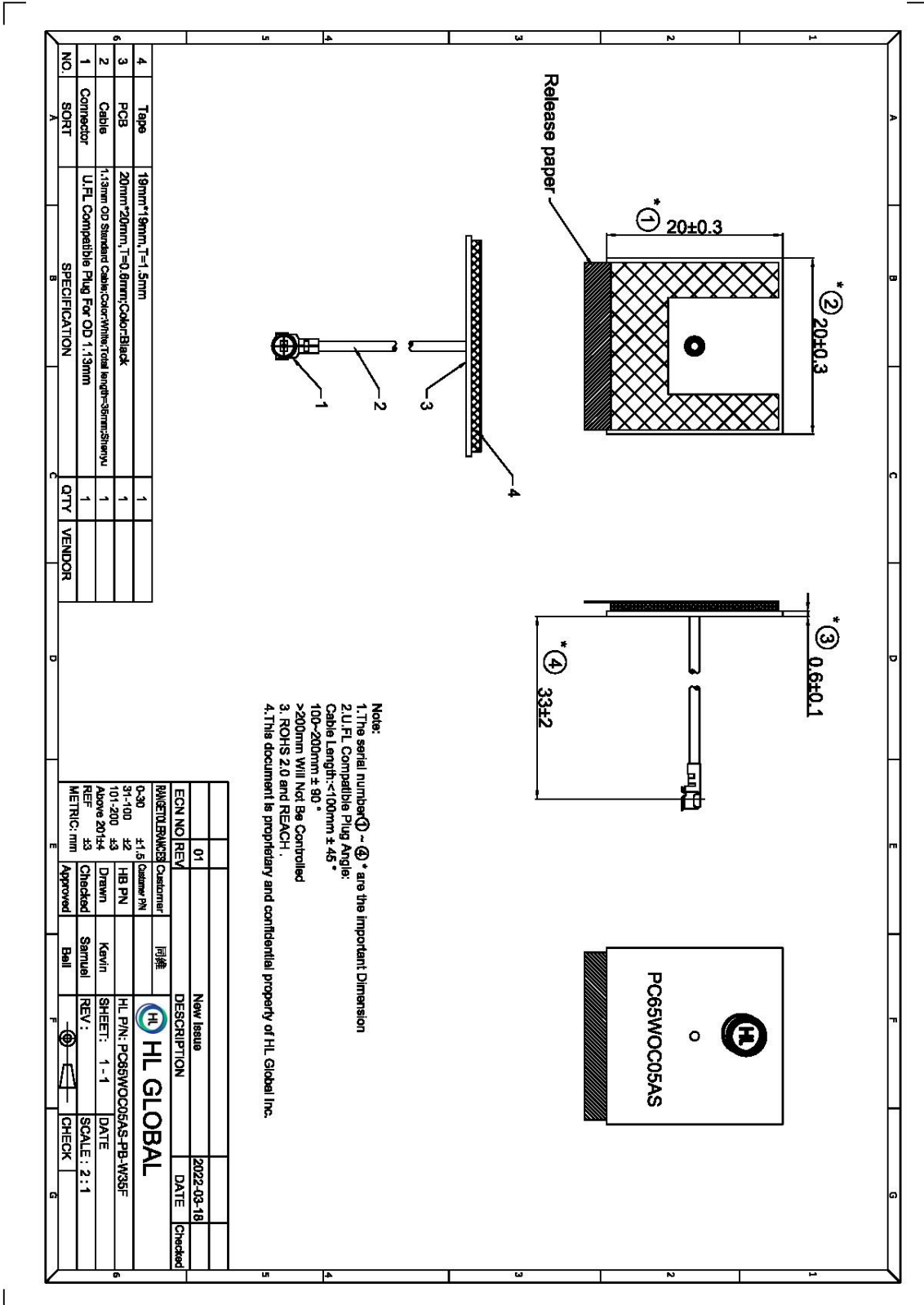


Figure 10.Assembly Drawing.