HL GLOBAL

PRELIMINARY ENGINEERING DATASHEET

PC65WOC01AS-G44F

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Datasheet Revision History

Revision	Date	Change Log
PC65WOC01AS-G44F/ Rev.01	19th/Jan/2022	Preliminary Datasheet 1.0

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1. Antenna Product Description

PC65WOC01AS-G44F Embedded Antenna features provides a high performance, off-board and cable feeding antenna solution. It was designed for supporting 5900-7125MHz bands applications including WiFi 6E.

2. Features Overview

PC65WOC01AS-G44F Embedded Antenna features

- Covering 5900-7125MHz freq
- Superior performance
- Off-board, low profile design
- 5.8dBi@7125MHz
- Low Cost, High performance

3. Product Photographs

Figure 1. Photo of HL Global antenna PC65WOC01AS-G44F.

4. Antenna Specification Summary

Wireless Standard	WiFi 6E
Frequency Range	5900-7125MHz
Peak Realized Gain(Max)	5.8dBi@7125MHz
Realized Efficiency	74%@7125MHz
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	25*25*0.8(mm)
Weight	1.07g
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. PC65WOC01AS-G44F antenna specification summary.

5. Principal Dimensions

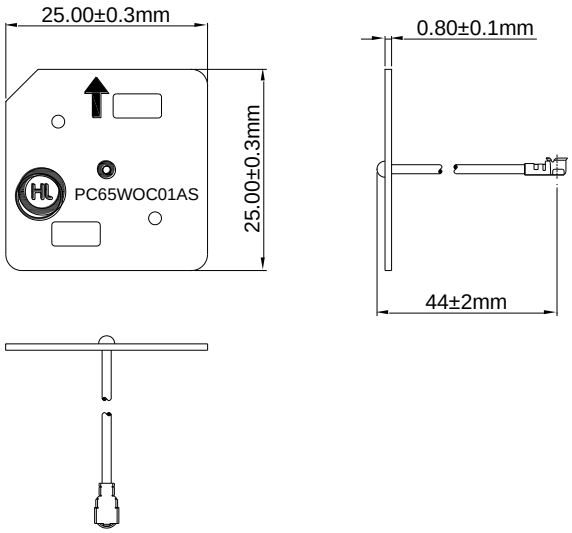
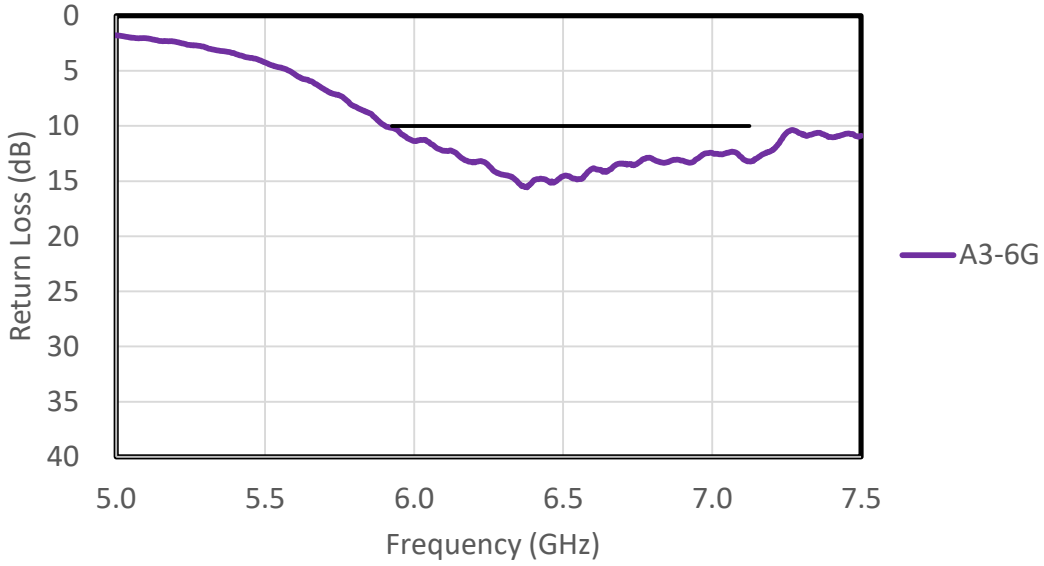


Figure 2. Basic dimensions and tolerances of PC65WOC01AS-G44F antenna.

6. Return Loss

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



Return loss （dB）	A3_6G
5900MHz	10.2
6500MHz	14.6
7125MHz	13.2

Figure 3. Measured Return Loss of PC65WOC01AS-G44F.

7. Radiation Pattern Characteristics

Radiation characteristics for PC65WOC01AS-G44F were measured in Satimo SG24L anechoic chamber.

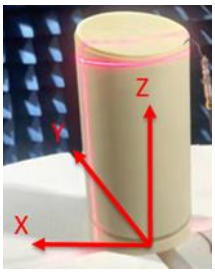


Figure 4.PC65WOC01AS-G44F antenna for radiation pattern measurements. Coordinate system used for radiation pattern visualization.

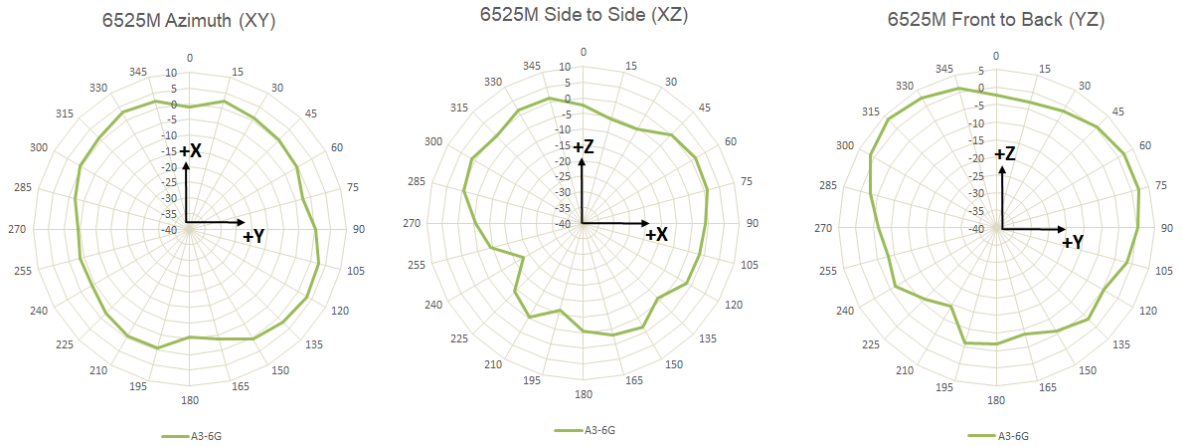


Figure 5. Measured radiation pattern characteristics in principal planes at 6525MHz.

8. Realized Efficiency and Peak Realized Gain

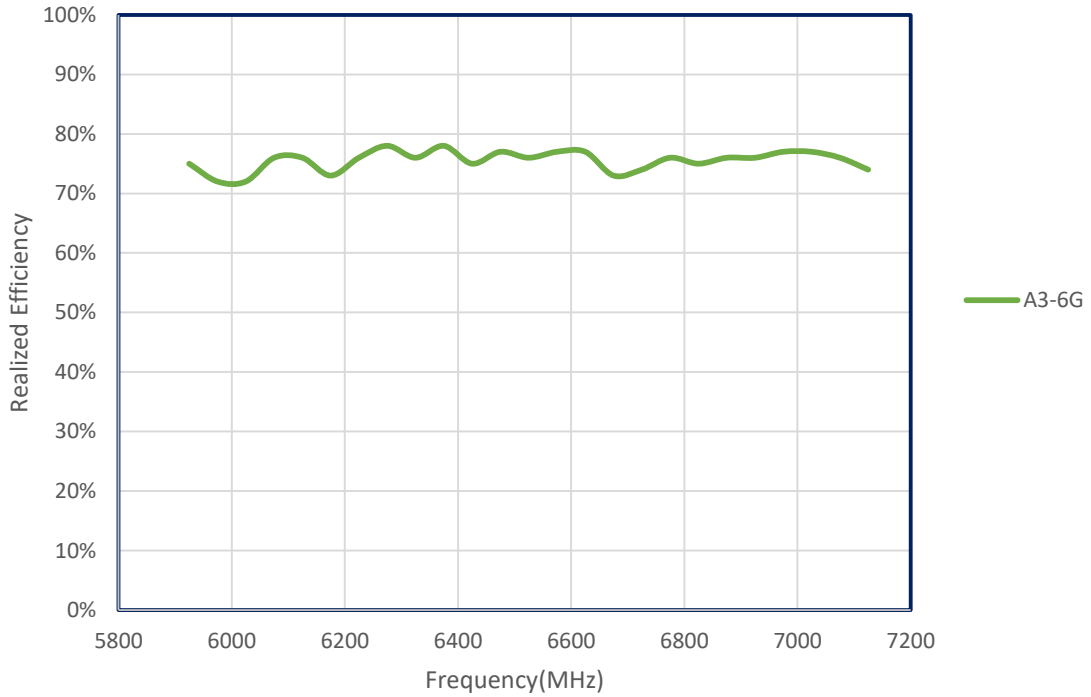


Figure 6. Measured Realized Efficiency over frequency.

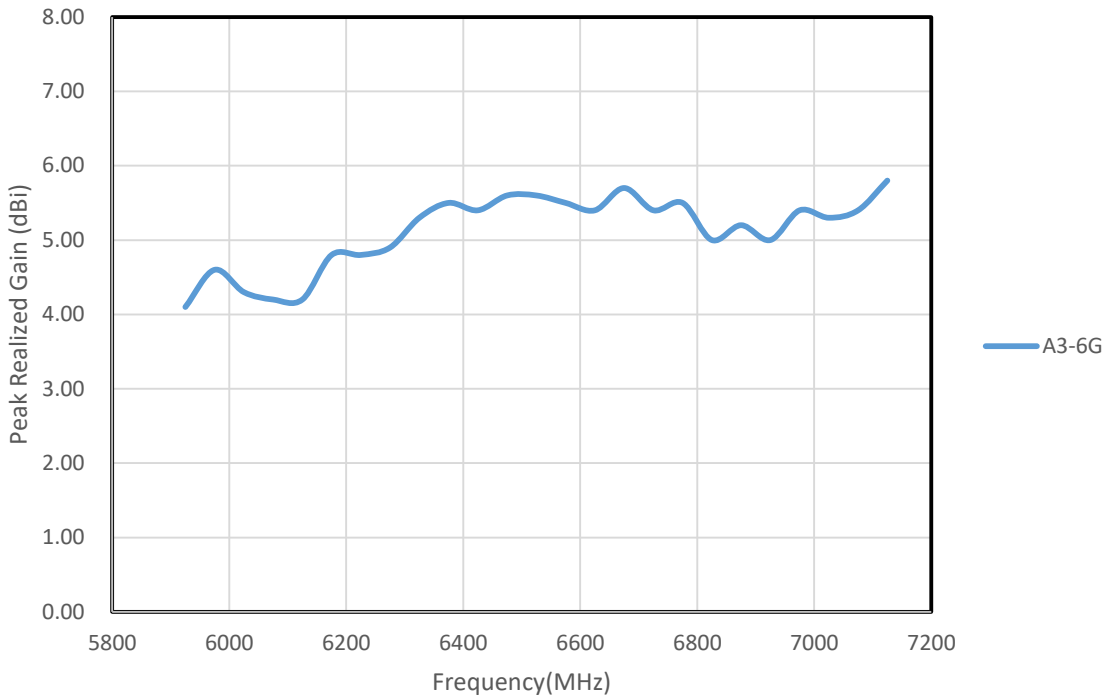


Figure 7. Measured Peak Realized gain over frequency.

Frequency(MHz)	Realized Efficiency	Peak Realized Gain(dBi)
5925	75%	4.1
5975	72%	4.6
6025	72%	4.3
6075	76%	4.2
6125	76%	4.2
6175	73%	4.8
6225	76%	4.8
6275	78%	4.9
6325	76%	5.3
6375	78%	5.5
6425	75%	5.4
6475	77%	5.6
6525	76%	5.6
6575	77%	5.5
6625	77%	5.4
6675	73%	5.7
6725	74%	5.4
6775	76%	5.5
6825	75%	5.0
6875	76%	5.2
6925	76%	5.0
6975	77%	5.4
7025	77%	5.3
7075	76%	5.4
7125	74%	5.8

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

9. Assembly Drawing

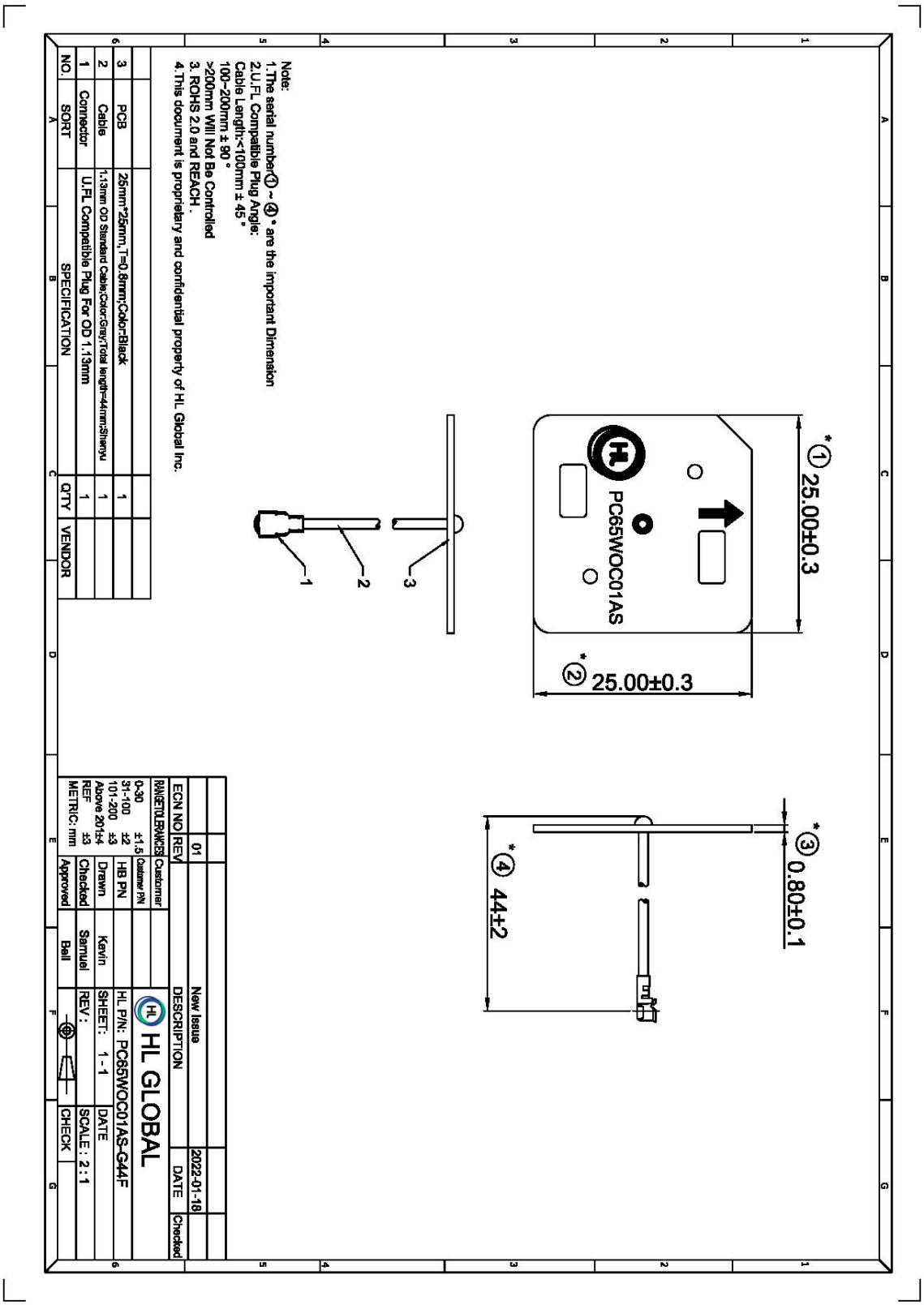


Figure 8. Assembly Drawing**.**