



HL GLOBAL

PRELIMINARY ENGINEERING DATASHEET

PC65WOC02AS-U44F

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Datasheet Revision History

Revision	Date	Change Log
PC65WOC02AS-U44F/ Rev.01	19 th /Jan/2022	Preliminary Datasheet 1.0

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1. Antenna Product Description

PC65WOC02AS-U44F 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

PC65WOC02AS-U44F Embedded Antenna features

- Covering 5900-7125MHz freq
- Superior performance
- Off-board, low profile design
- 5.7dBi@7125MHz
- Low Cost, High performance

3. Product Photographs

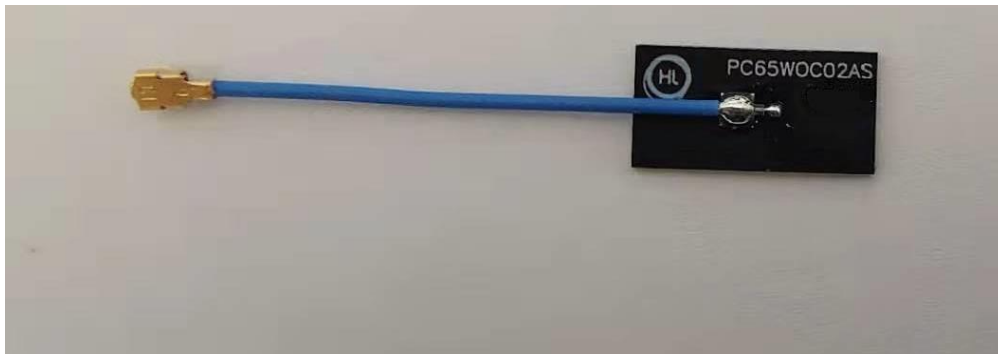


Figure 1. Photo of HL Global antenna PC65WOC02AS-U44F.



4. Antenna Specification Summary

Wireless Standard	WiFi 6E
Frequency Range	5900-7125MHz
Peak Realized Gain(Max)	5.7dBi@7125MHz
Realized Efficiency	78%@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	18*9*0.8(mm)
Weight	0.48g
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. PC65WOC02AS-U44F antenna specification summary.

5. Principal Dimensions

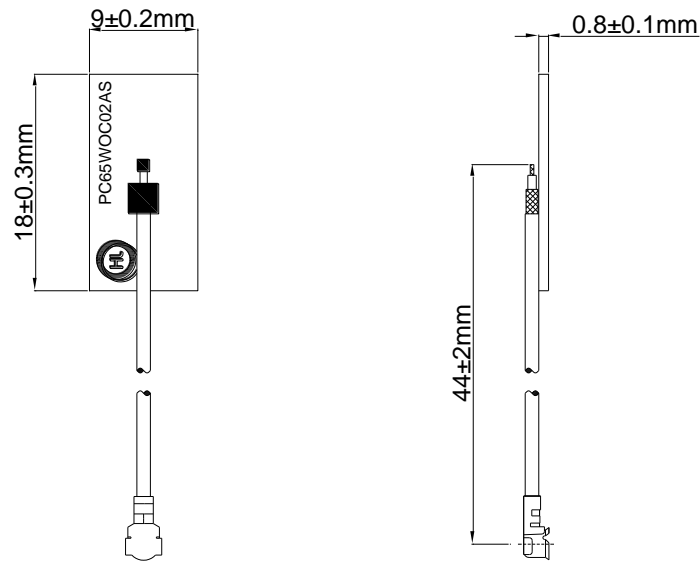
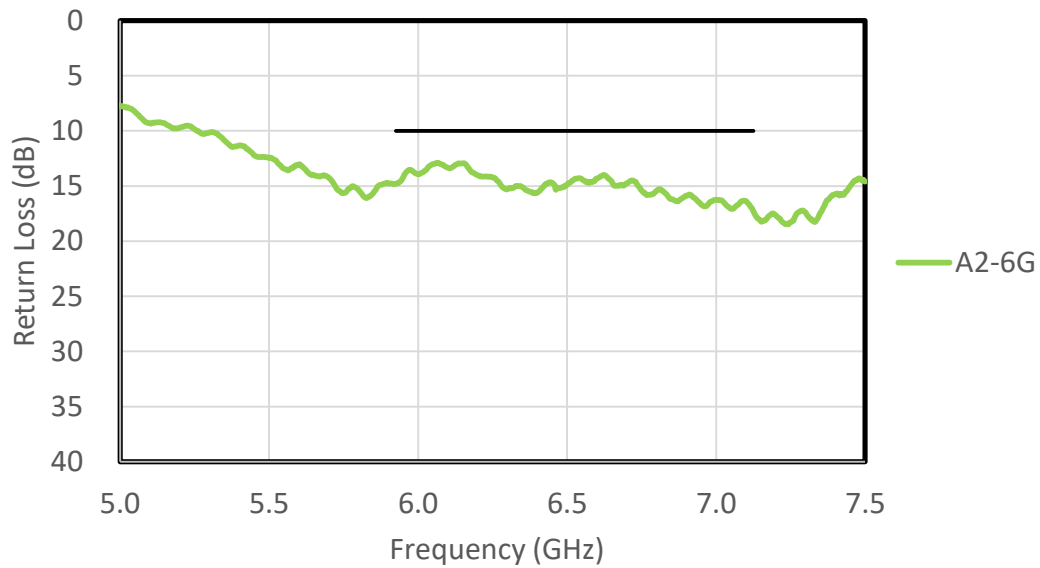


Figure 2. Basic dimensions and tolerances of PC65WOC02AS-U44F antenna.

6. Return Loss

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



Return loss (dB)	A2_6G
5900MHz	14.8
6500MHz	14.9
7125MHz	17.3

Figure 3. Measured Return Loss of PC65WOC02AS-U44F.



7. Radiation Pattern Characteristics

Radiation characteristics for PC65WOC02AS-U44F were measured in Satimo SG24L anechoic chamber.

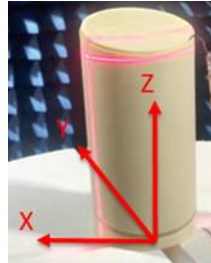


Figure 4. PC65WOC02AS-U44F antenna for radiation pattern measurements. Coordinate system used for radiation pattern visualization.

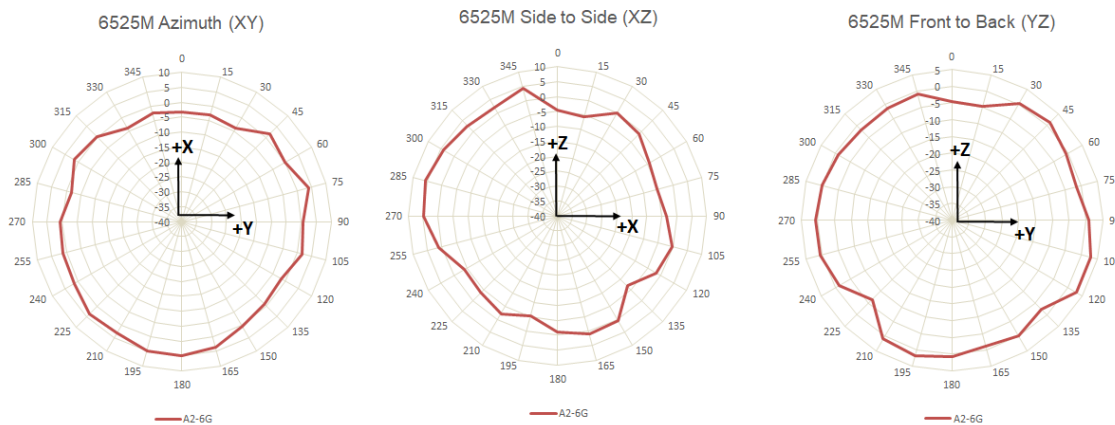


Figure 5. Measured radiation pattern characteristics in principal planes at 6525MHz.



8. Realized Efficiency and Peak Realized Gain

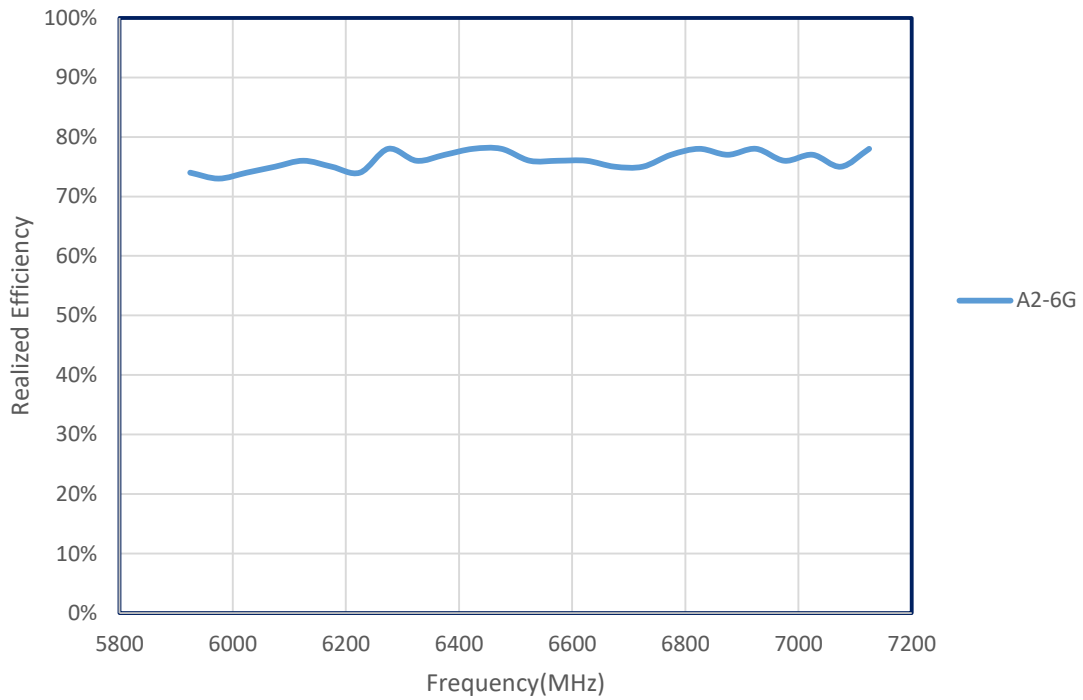


Figure 6. Measured Realized Efficiency over frequency.

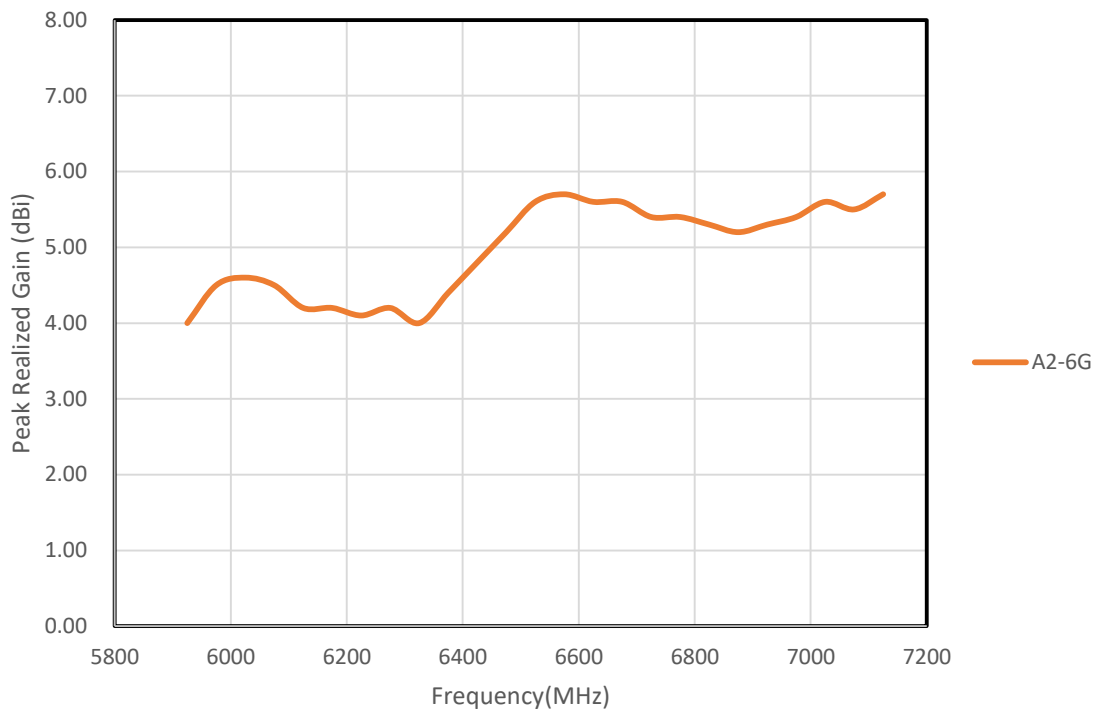


Figure 7. Measured Peak Realized gain over frequency.



Frequency(MHz)	Realized Efficiency	Peak Realized Gain(dBi)
5925	74%	4.0
5975	73%	4.5
6025	74%	4.6
6075	75%	4.5
6125	76%	4.2
6175	75%	4.2
6225	74%	4.1
6275	78%	4.2
6325	76%	4.0
6375	77%	4.4
6425	78%	4.8
6475	78%	5.2
6525	76%	5.6
6575	76%	5.7
6625	76%	5.6
6675	75%	5.6
6725	75%	5.4
6775	77%	5.4
6825	78%	5.3
6875	77%	5.2
6925	78%	5.3
6975	76%	5.4
7025	77%	5.6
7075	75%	5.5
7125	78%	5.7

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



9. Assembly Drawing

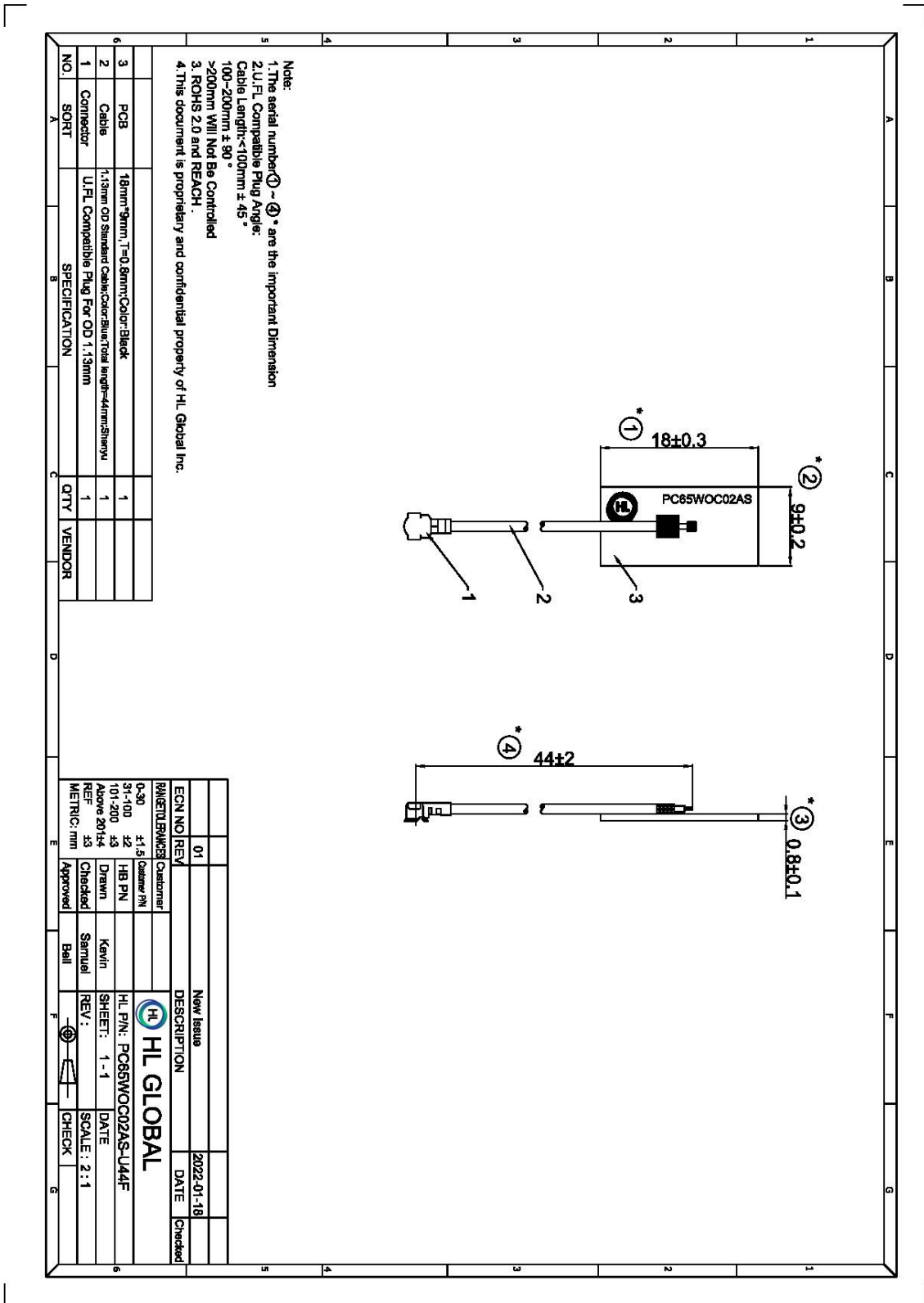


Figure 8.Assembly Drawing.