

SPECIFICATION

- Part No. : **PC81.07.0100A.db**
- Product Name : **TheStripe™** 868Mhz PCB Antenna
100mm IPEX 1.13mm diameter MHF connector
foam attachment for assembly
- Features : 34mm*7mm*0.8mm(PCB)
16mm*6mm*7mm(foam)
Compatible with Hirose U.FL

Photo:



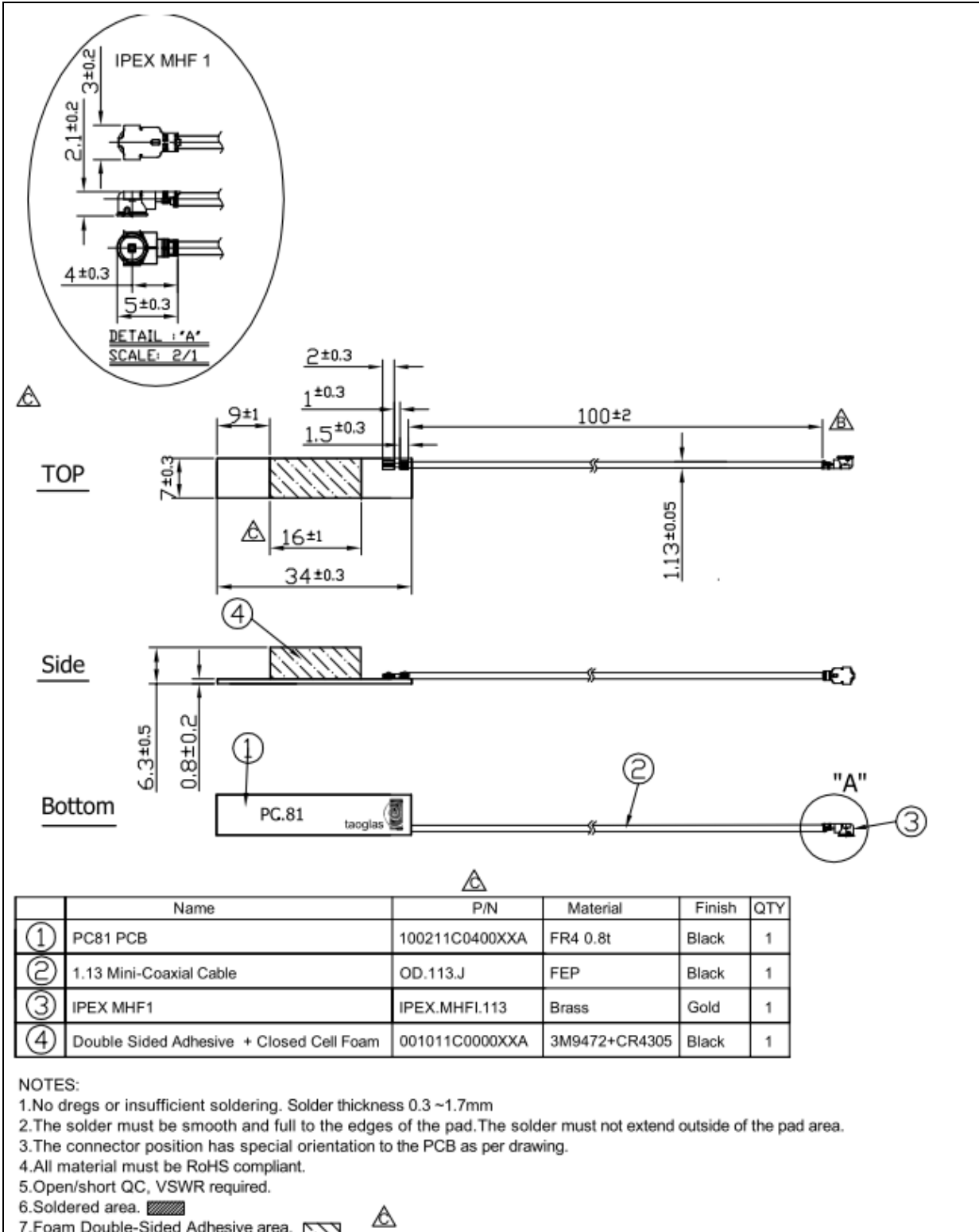
1. Introduction

This miniaturized low profile PCB antenna is based on smart TheStripe™ antenna technology. It consists of a PCB antenna and 1.13mm mini coaxial cable with Ipex MHF (Hirose U.FL comp) connector.

2. Typical Antenna Performance in free space

| Parameter | Specification |
|-------------------|------------------|
| Applications | 868MHz ISM Band |
| Frequency Band | 868-870MHz |
| Efficiency | 50.46% |
| Return Loss | <-10dB |
| VSWR | <2.0:1 |
| Impedance | 50 Ohm |
| Polarization | Horizontal |
| Radiation Pattern | Omni-Directional |

3. Mechanical Dimensions

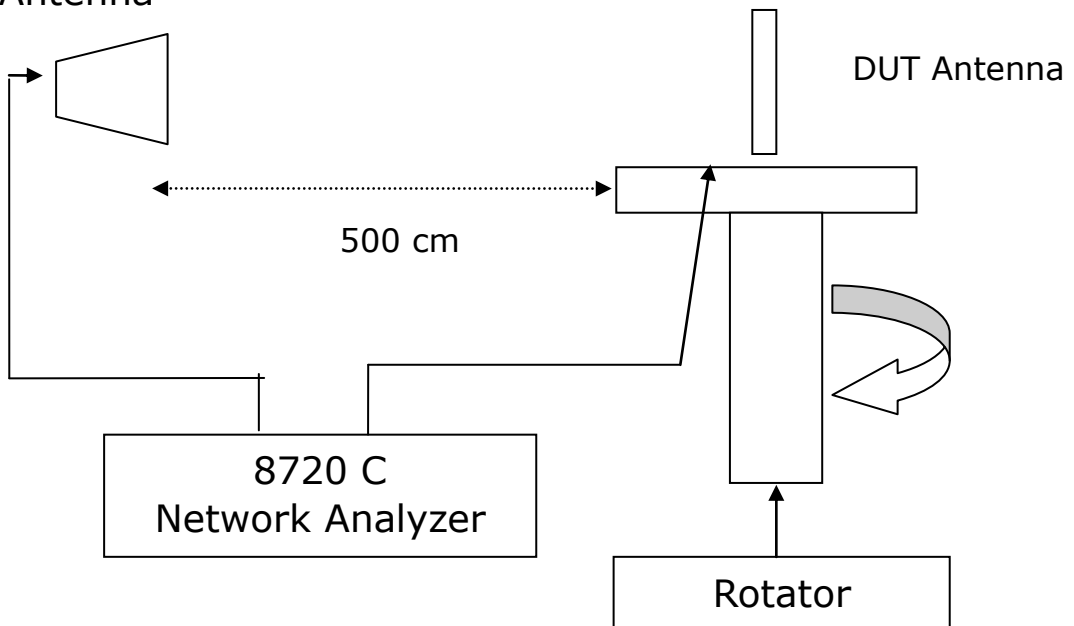


4. Antenna Test Setup and Results

4.1 Equipment

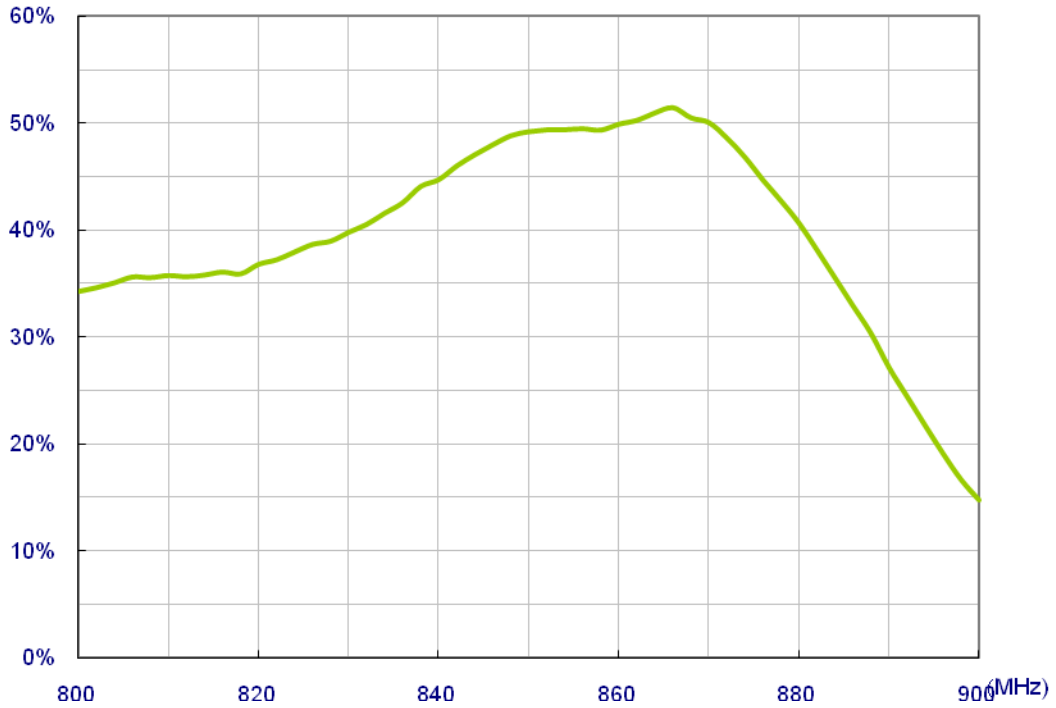
Radiation Pattern Testing - Anechoic

HORN
Standard Antenna



4.2 Efficiency

Efficiency of PC.81 with 100mm coaxial in free space

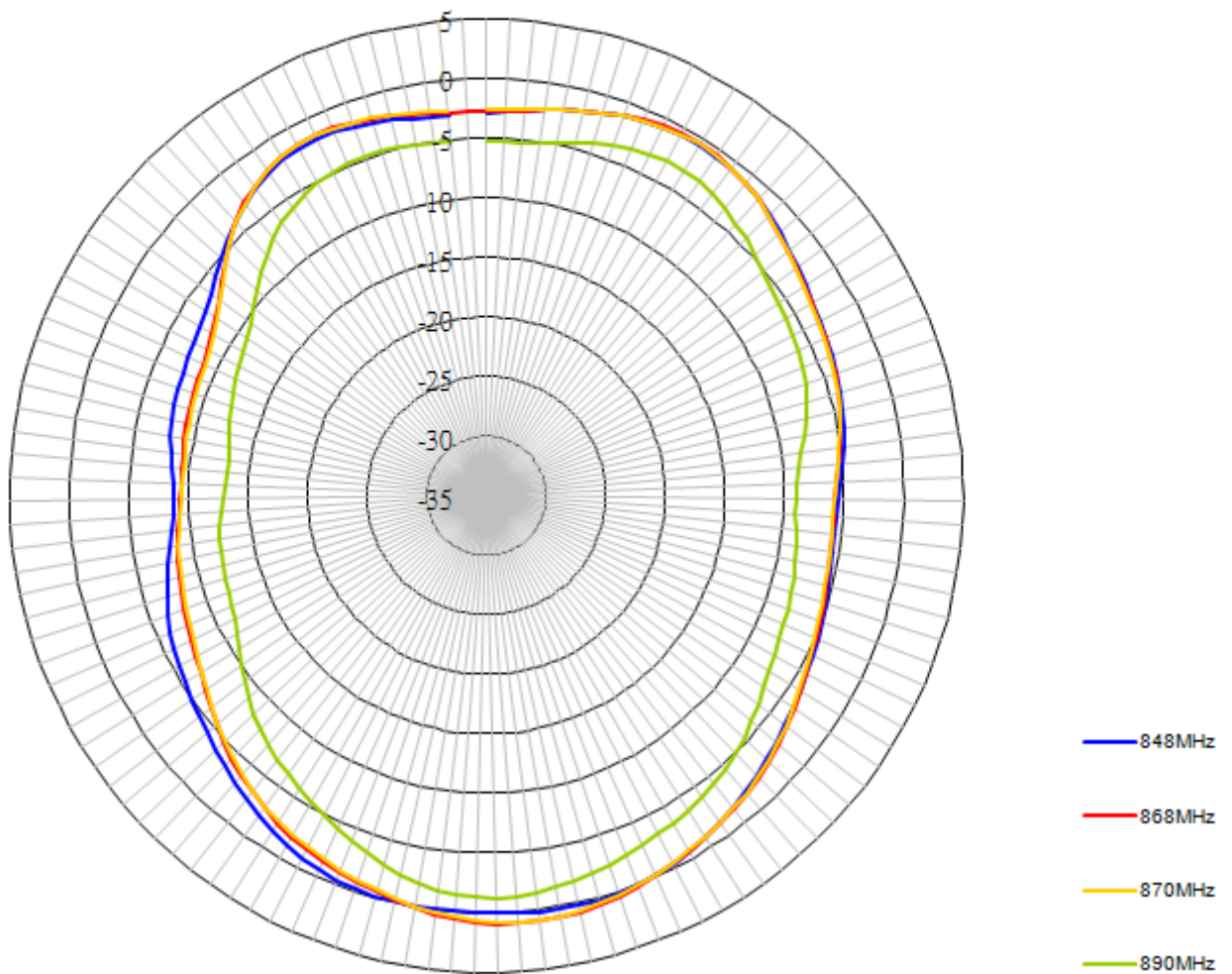


| PC.81 Efficiency Data | | | | | | | | | | | | |
|-----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Band(MHz) | 800 | 810 | 820 | 830 | 840 | 850 | 860 | 868 | 870 | 880 | 890 | 900 |
| Gain | 0.78 | 0.93 | 1.21 | 1.55 | 1.88 | 2.25 | 2.36 | 2.51 | 2.6 | 1.82 | 0.01 | -2.56 |
| Efficiency (%) | 34.26 | 35.75 | 36.79 | 39.78 | 44.69 | 49.16 | 49.86 | 50.46 | 50.01 | 40.63 | 27.15 | 14.79 |
| Efficiency dB | -4.65 | -4.47 | -4.34 | -4 | -3.5 | -3.08 | -3.02 | -2.97 | -3.01 | -3.91 | -5.66 | -8.3 |

4.3 Radiation Patterns

4.3.1 E-Plane (Horizontal/Azimuth Plane)

FC.81 E-plane Radiation



4.3.2 H-Plane (Vertical/Elevation Plane)

PC.81 H-plane Radiation

