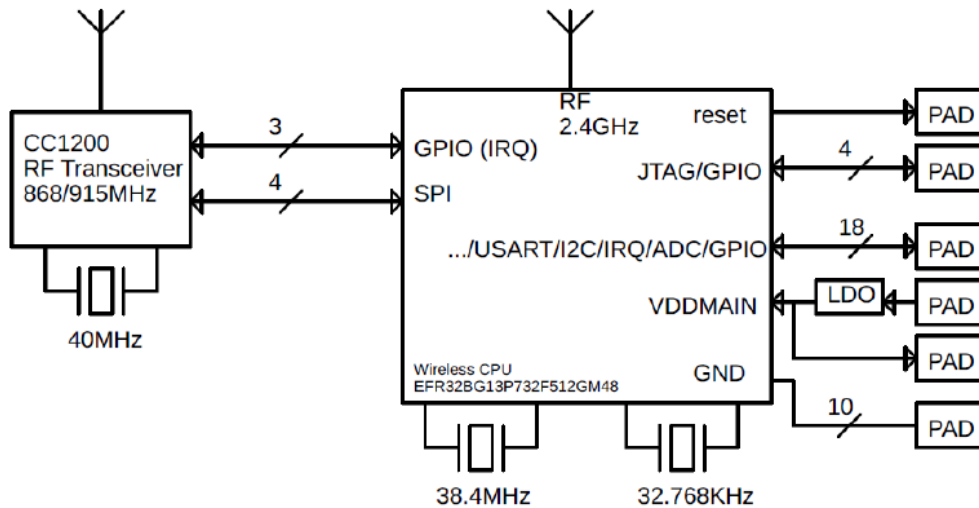


Antenna specification

Yanzi stamp is a low energy radio module designed for next generation of Yanzi wireless IoT sensors.



Antenna specifications

- The 2.4GHz radio uses onboard chip antenna (Johanson technology **2450AT45A100E**) in vertical mount position. The gain of the antenna in this position is 2.2dBi typ. The on-board PA for 2.4GHz radio can produce max power of 19dBm (80 mWatt) while the antenna's max input power can be up to 3Watts. For more information, please refer to the device datasheet.
- The Sub-GHz external antenna must be U.FL. connector compatible and must be a dipole type antenna.
- The tested and recommended sub-GHz antenna for 868 and/or 915MHz operations are shown below.
- Molex's **105262 series**. flexible dipole antenna.
 - Peak Gain parameters: 868MHz 0.4dBi, 915MHz 1.4 dBi.
 - Max input power 2 Watts.



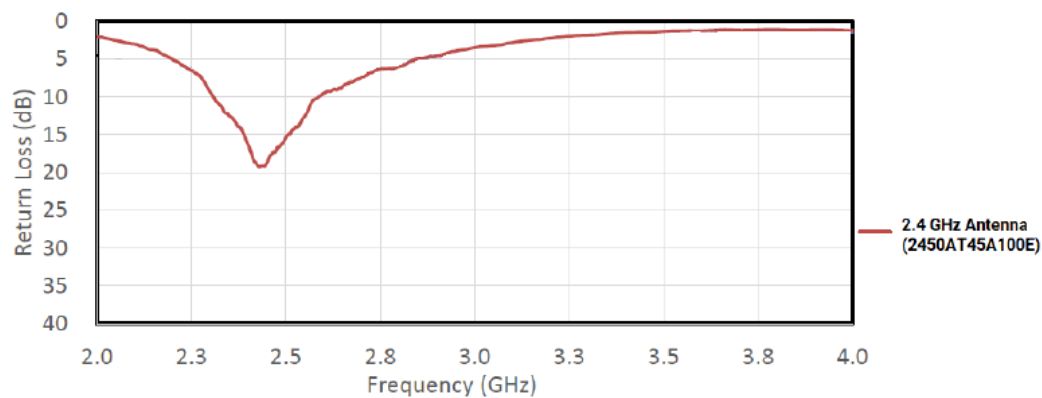
- Molex's **206764 series** flexible dipole antenna.
 - Peak Gain parameters: 868MHz 1.2dBi, 915MHz 1.2dBi
 - Max input power 2 Watts
-



2.4 GHz chip antenna S-parameters and radiation patterns

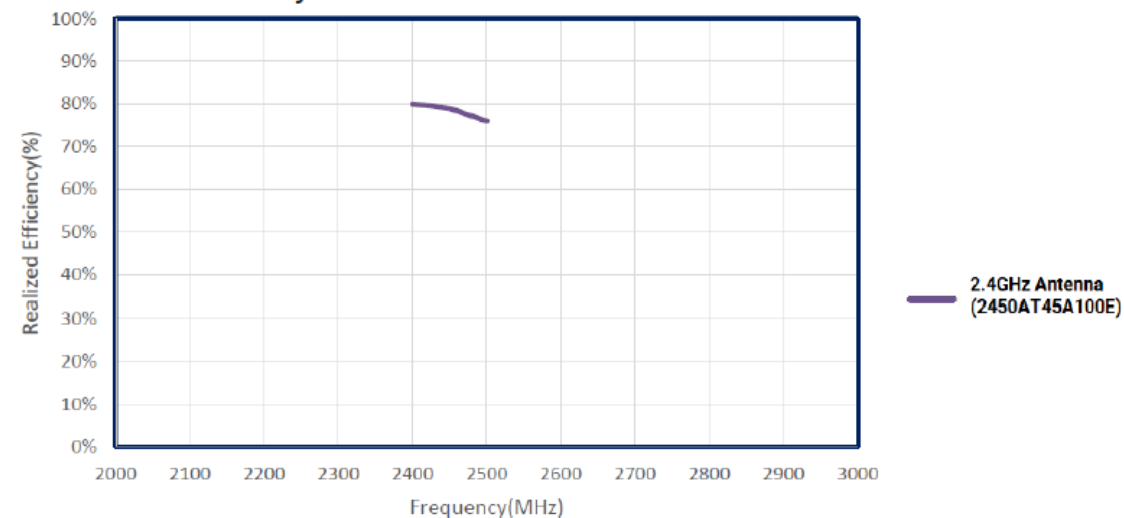
Calibration plane is at the location of feeding port

Return loss of WLAN Antenna



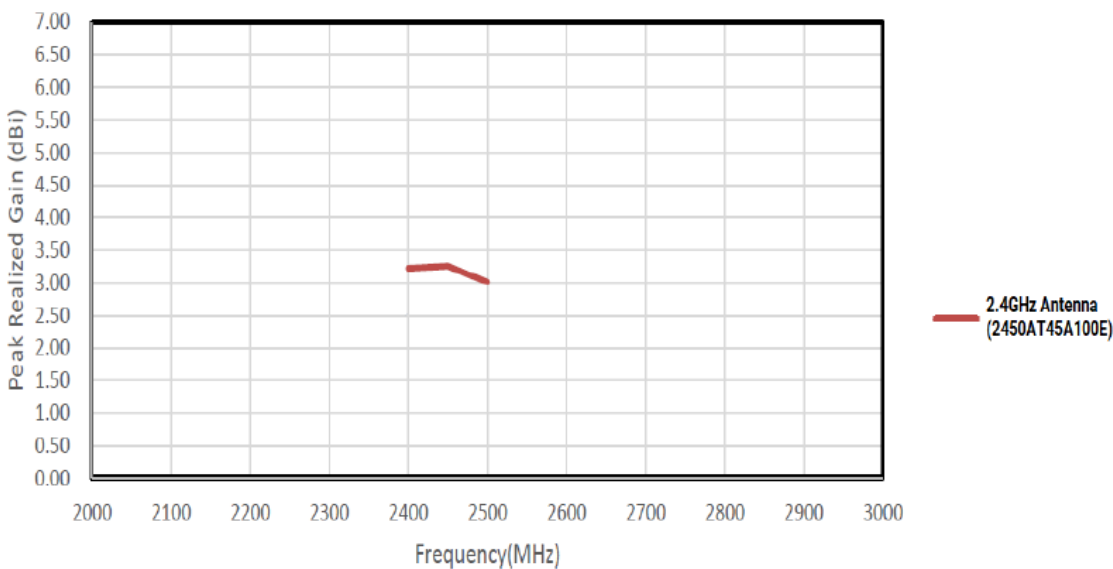
@2.4GHz 16.4 dB and @2.5GHz 15.3dB

Realized efficiency



@2.4GHz 80%, @2.45GHz 79%, @2.5GHz 76% Avg:74%

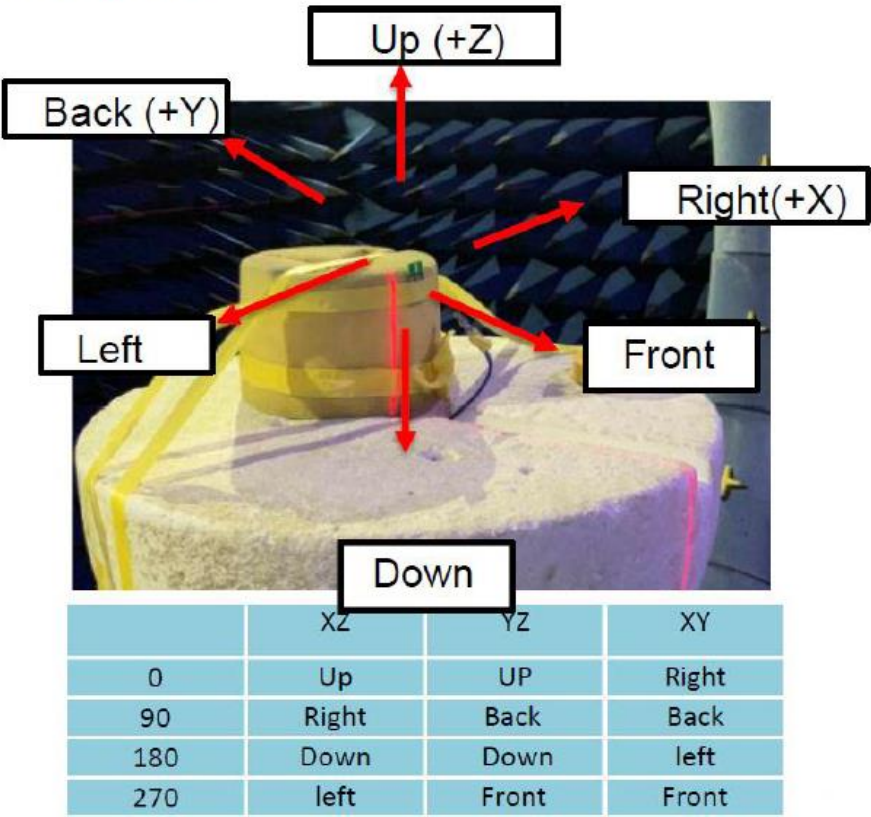
Peak realized gain

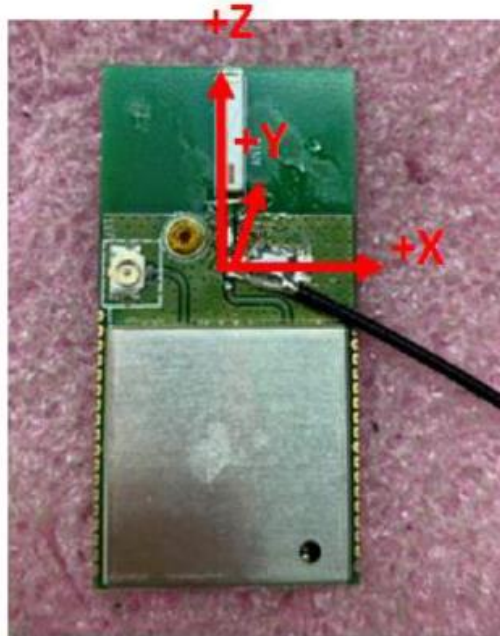


@2.4GHz 3.22dBi, @2.45GHz 3.25dBi, @2.5GHz 3.01dBi

Radiation pattern visualization

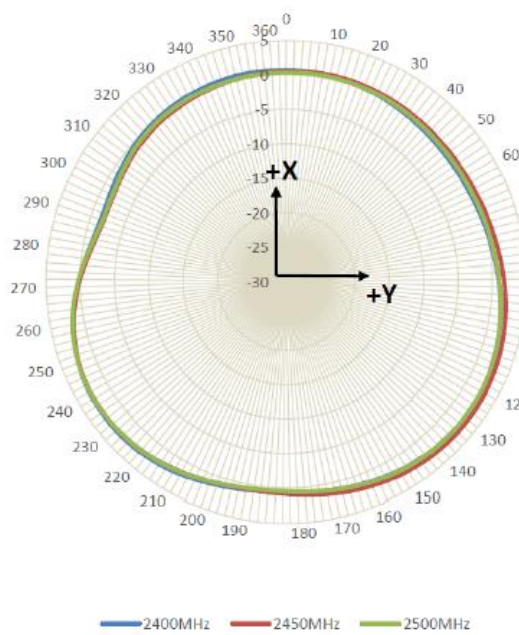
Orientation of the DUT



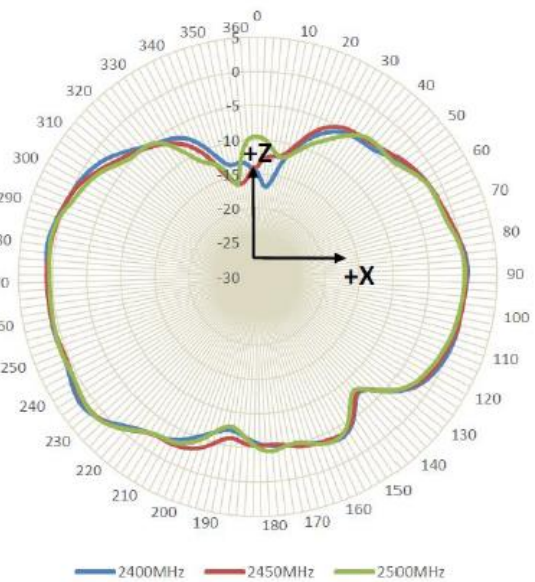


Total gain patterns in principal planes

Azimuth(XY)



Side to Side(XZ)



Front to Back(YZ)

