

V-FA-002 ANTENNA TEST REPORT

2025/7/30

PRODUCTION SPECIFICATION

Company: PCB processed antenna, no manufacturer

Model Name: V-FA-002

Model Size: 42mm(Length)×20mm(Width)×0.50mm(Thickness)

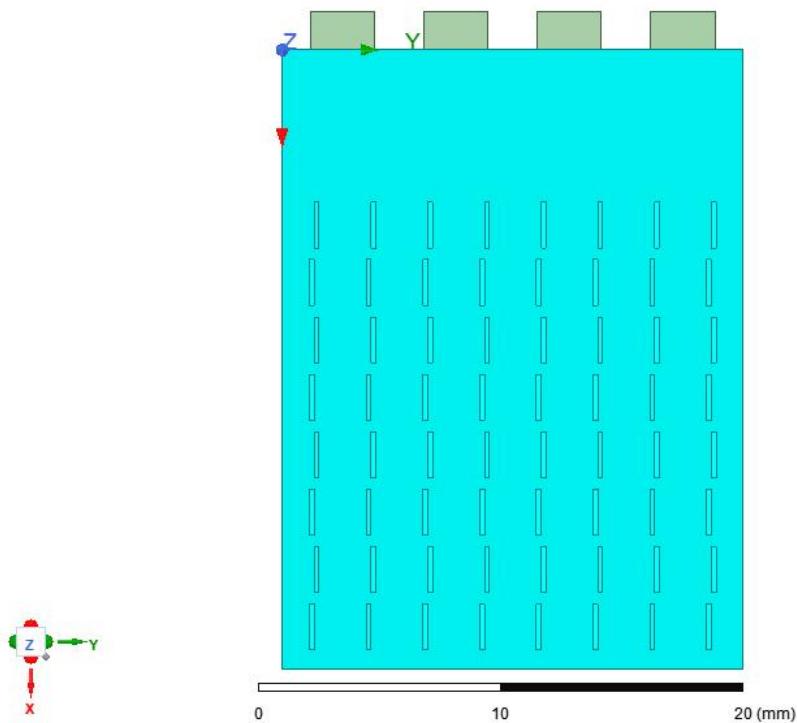


Figure 1: Antenna model diagram

AIP ANTENNA TEST DESCRIPTION

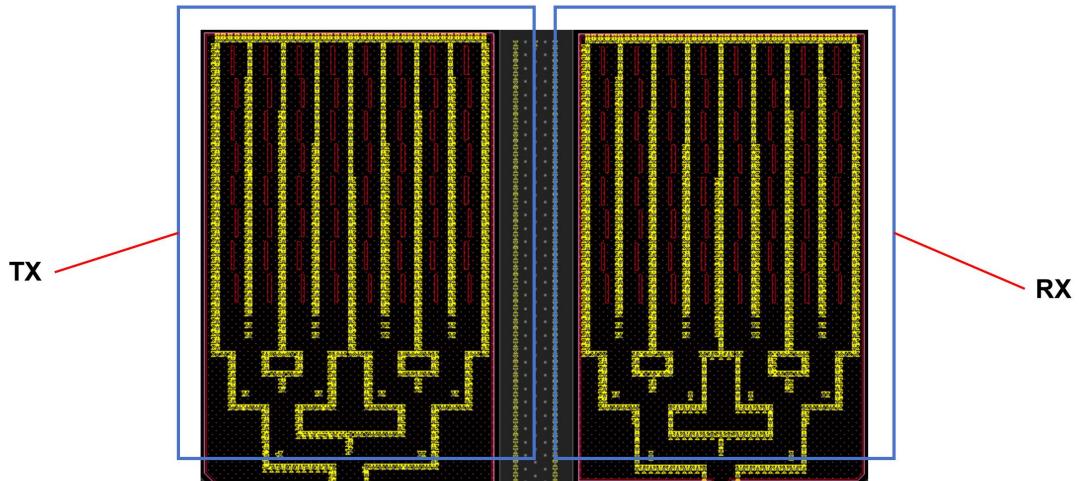


Figure 2: Antenna PCB structure

The transmitting and receiving antennas are independent, but share the same structure. The left half is the transmitting antenna, while the right half is the receiving antenna.

ANTENNA TEST PRINCIPLE AND METHOD

Principle: Conservation, that is, the signal power received by Rx is equal to the power lost in the energy space when the Tx transmit power is lost.

Gain test method: Comparison method, using the equal power loss in space, replacing the Rx antenna with a horn antenna for reception to obtain the Rx antenna gain.

Directional pattern test method: Use angular reflection to collect level values in different directions, and then obtain a normalized pattern.

S11 SIMULATION

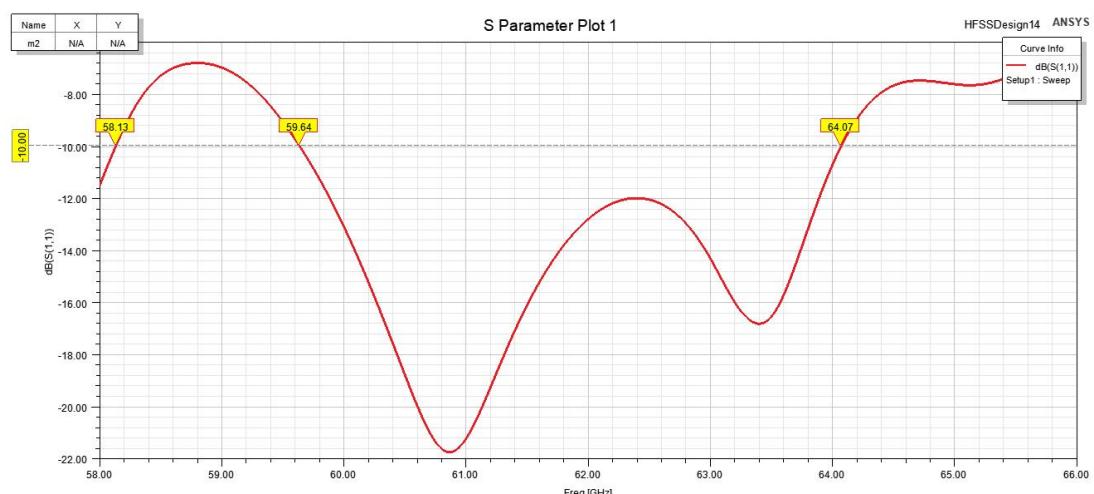


Figure 3: S11 simulation

60GHZ RADIATION PATTERN

ANT Gain=EIRP-Tx Output Power

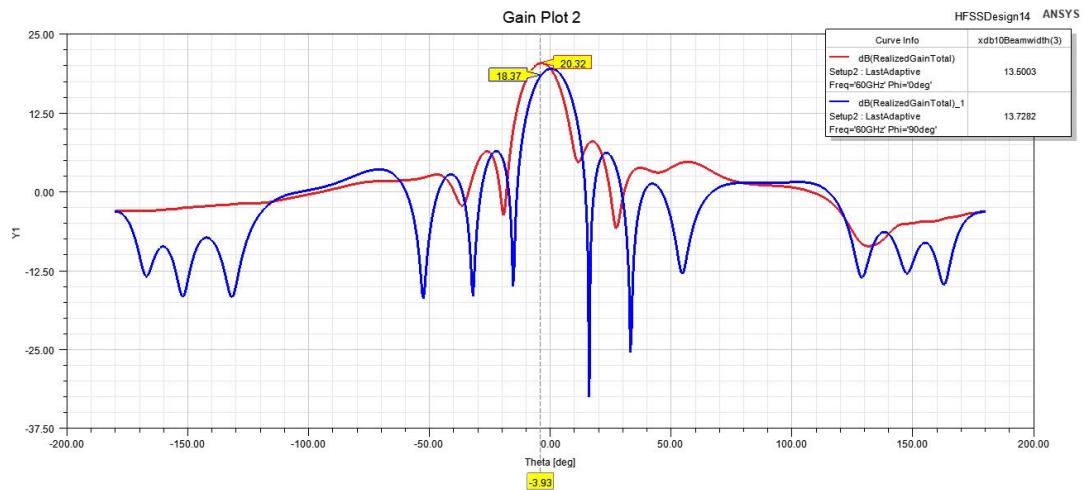


Figure 4: Composite directional diagram of azimuth and elevation planes @60GHz