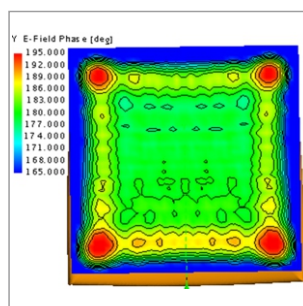
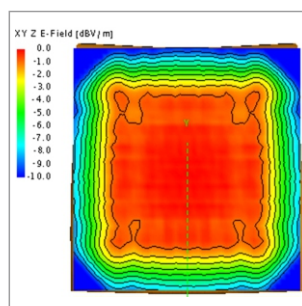
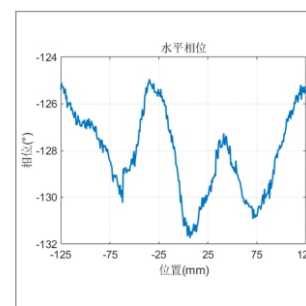
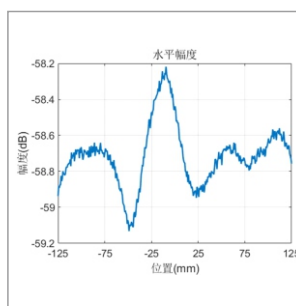


◆ Quite Zone Distribution



Simulation of quite zone amplitude phase distribution



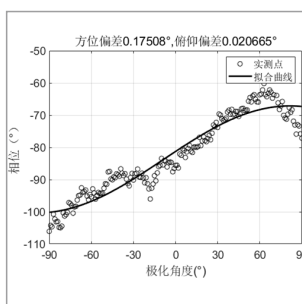
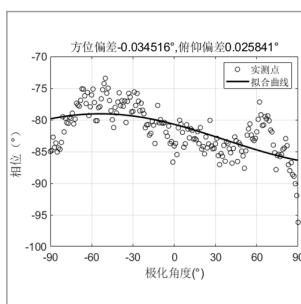
Measurement of horizontal section amplitude phase change

◆ Technical Feature

• High accuracy system calibration

The mounting error measurement of phased array antenna is realized by adopting channel phase calibration mounting error, to ensures the high precision measurement of phased array antenna. This method does not need to rely on additional instruments and equipment to realize the calibration of the mounting error of phased array antenna, it only needs to carry out a few (2 is enough) channel phase measurement, with fast testing speed and low testing cost, and calibration could be carried out at any time. This method can be used to solve the engineering problems such as the correction of the receiving & transmitting beam pointing difference and the correction of the pointing difference between different antennas.

The link self-calibration of the design system ensures the accuracy and reliability of the testing site.



Calibration of phased array antenna mounting error

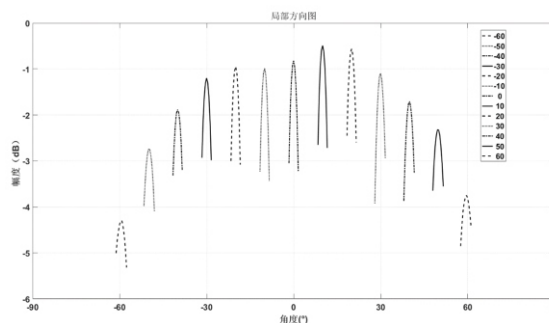
• Fast measurement

Based on hardware trigger synchronization technology of testing position alignment, it realizes the fast measurement required by high precision measurement. The method accurately aligns the testing positions, with the given accuracy, the phased array antenna could carry out continuous multi-frequency points and multi-beam automatic measurement. The testing time can be greatly compressed, and the testing speed can be improved by an order of magnitude compared with the step-by-step hard-triggered testing.

• Intelligent testing

1) Non-uniform optimization technique for calibration/testing frequency points. Testing frequency points can be optimized as per performance requirements or production control requirements, such as setting specific calibration phase control limits, and calibration frequency points can be reduced by an order of magnitude. This method greatly reduces the testing points and improves the testing efficiency.

2) Non-equidistant measurement, partial measurement and variable sampling techniques. Pattern testing applied for phased array antenna, the testing range, testing timing sequence and sampling logic are optimized according to the testing indicators and testing state requirements, to reduce the testing point numbers and improve the testing efficiency.



Measurement of phased array antenna and beam partial pattern

◆ Main Function

- Testing system self-check and self-calibration
- Phased array antenna mounting error compensation
- Phased array antenna amplitude phase calibration
- EIRP
- G/T
- Pointing error
- Linear/circular polarization radiation pattern
- Gain
- Half power beam width
- Side lobe level
- Cross polarization
- 1dB compression point
- Third-order Intercept
- Spurious signal
- Beam switching time