Anritsu Advancing beyond

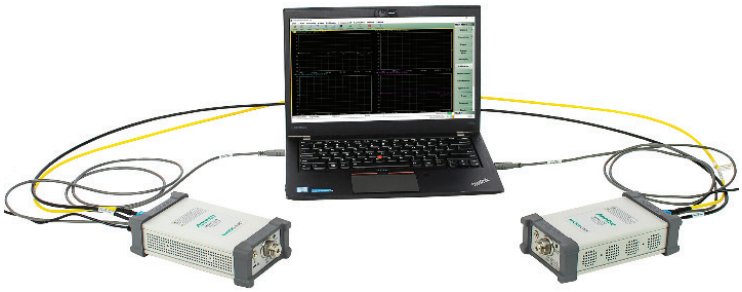
ShockLine™ ME7868A Over-the-Air (OTA) Chamber Solution

Introduction

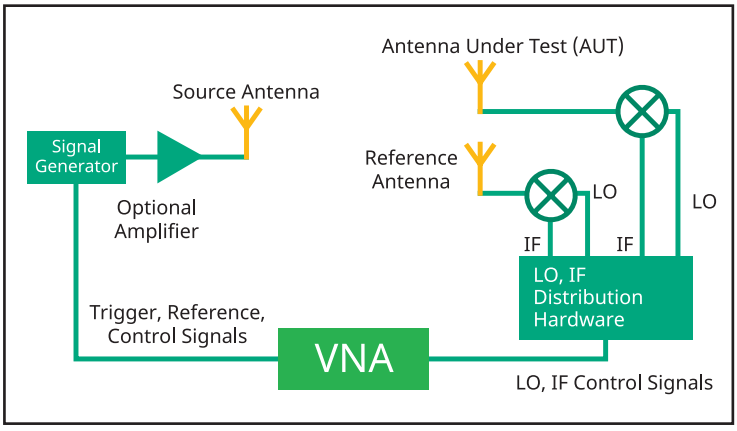
Using traditional VNAs to test antennas in OTA chambers generally requires long test port cables. These cables introduce insertion loss and phase instability into S-parameter measurements especially at microwave frequencies and above. As distances grow, the cable issues become so significant that additional test hardware is required to overcome the issues. This significantly raises the cost and increases the complexity of the antenna test solution.

The ShockLine 2-Port Vector Network Analyzer ME7868A Solution

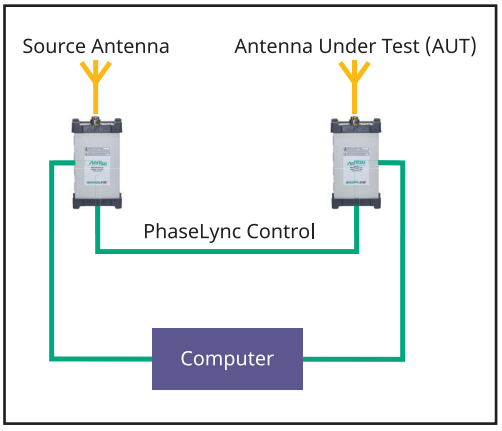
Our ShockLine ME7868A is a unique chassis-less 2-port VNA with portable port modules covering a frequency range from 1 MHz to 8/20/43.5 GHz. Its groundbreaking architecture allows physical placement of the VNA ports 25+ meters apart with the same functionality as a traditional single chassis VNA solutions and at a significantly lower cost.



ShockLine ME7868A 2-Port VNA



Typical VNA OTA Chamber Antenna Test Setup



Equivalent ShockLine ME7868A OTA Chamber Setup

Key Advantages of the ShockLine ME7868A for OTA Chamber Applications

- Portable distributed ports eliminate the need for long test port cables
  - Eliminates cable insertion loss
  - Improves phase stability over movement and temperature
  - No additional equipment needed to overcome cable issues reducing test cost and complexity
  - Small formfactor eases chamber integration
- Supports Typical OTA Tests
  - Antenna Return Loss
  - Antenna Insertion Loss
  - Antenna Gain
  - Pattern measurements
  - Path Loss
  - Phase front characterization
  - Range match correction

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