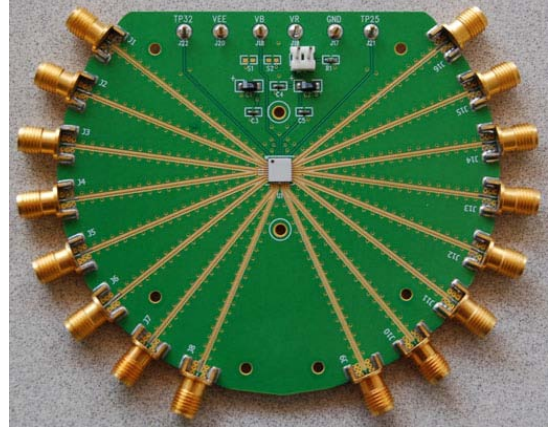




Constant Wave Spectro TDS™ Toolkit

Time Domain Substitution for Custom Applications



Time Domain Substitution

Time Domain Substitution makes it easy to calibrate vector network analyzers (VNAs) where they need to be calibrated--near the device under test. Most VNAs can be easily calibrated at the ends of coaxial cables using automated calibrators. But in today's world, many measurements must be made beyond the reach of coaxial cables. Making calibration easier, but at the wrong reference plane, is not an acceptable solution. Post-processing methods, such as port extension and frequency gated by time, are only approximate solutions.

The patent pending technology of Time Domain Substitution allows the user to set the reference plane by merely creating a temporary short circuit at the desired location. No expensive custom calibration standards are required.

Spectro TDS™ Toolkit

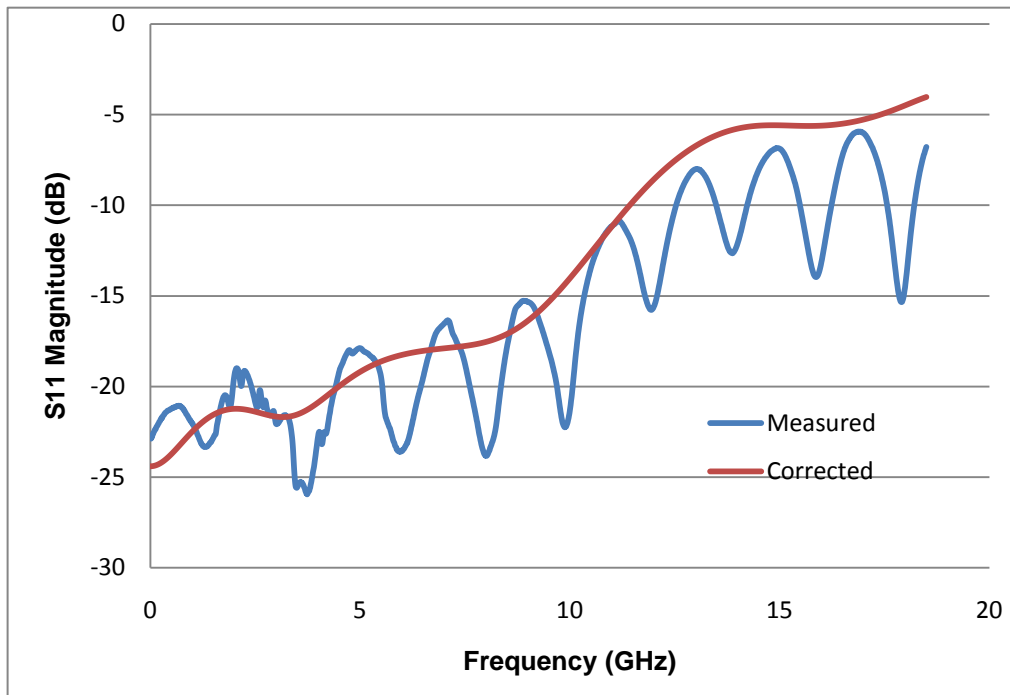
Spectro TDS Toolkit makes the power of Time Domain Substitution available to a variety of programming environments. The Toolkit is provided as a Dynamic Link Library (DLL) for Windows computers.

- Access from LabVIEW™ by creating a call library function node
- Access from MATLAB® is available by loading the library with loadlibrary and calling functions with calllib.
- Other languages such as C and C++ use standard techniques for calling DLL functions.

Master complex measurement challenges--ideal for non-coaxial environments

This graph demonstrates the power of Time Domain Substitution to measure only the desired component in the presence of other components on a printed circuit board. The blue line is the magnitude of S11 measured with a VNA that is calibrated at the end of coaxial cables. The measurement obscures the true performance of the DUT because of reflections from the launch onto the PC board.

The red line is the magnitude of S11 after the application of Time Domain Substitution. The DUT response has been extracted from the combined response of the PC board and DUT.



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