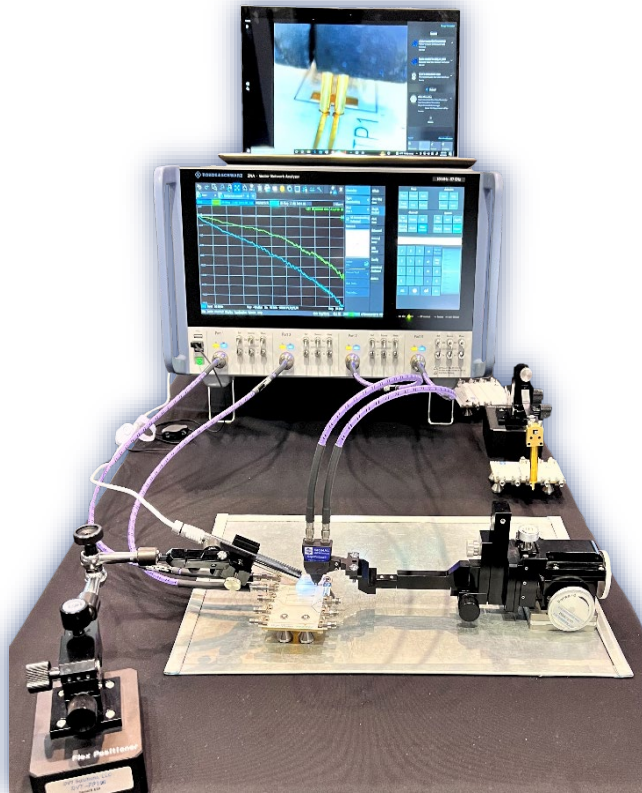
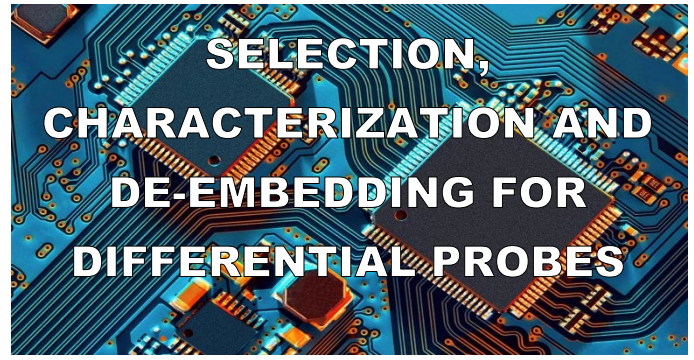




ROHDE & SCHWARZ



SELECTION, CHARACTERIZATION AND DE-EMBEDDING FOR DIFFERENTIAL PROBES



Scan the above QR code and share this technical application video with your design team in order to better understand how to accurately de-embed true differential probes thereby making more accurate time and frequency domain measurements.

The video demonstrates how differential probes can be used to verify that the passive signal structures on final product prototype PCBs conform to the initial design before releasing the board for active testing.

As an added benefit, it also verifies that PCB manufacturers can produce these high-speed boards in required volumes.

The video demonstrates how to use the Rohde & Schwarz ZNA 67 GHz VNA along with the DVT Solutions DVT-FPP70 70 GHz differential probe for obtaining superior measurement accuracy using advanced interconnect de-embedding techniques.

Key takeaways

- ✓ What is a differential probe and where is it used in the PCB design verification process?
- ✓ In a Touchtone file, what S-parameter measurements are not recorded by the VNA when using a differential probe?
- ✓ A guide to choosing the right probe for probing 1 mm pitch test pads on PCBs to significantly reduce measurement error.
- ✓ The step-by-step process for creating differential probe models used by the VNA for de-embedding a differential probe.
- ✓ Using a 70 GHz golden PCB test trace structure to ensure accurate measurements and to evaluate the results after the probe has been de-embedded.
- ✓ At the end of the video, an advanced de-embedding technique is used to de-embed the probe launch discontinuity resonance S-parameter from the measurements.

Technical Presenters

Martin Stumpf, *R&S Segment Manager, High-Speed Digital Design Test*

Brian Shumaker, *President & CEO, DVT Solutions (GigaProbes)*

Greg Vaught, *R&S Product Planner, Vector Network Analyzers*