DVT Solutions, LLC
Giga Probes

DVT-FPPXX High Fidelity Two Probe Kit

40/50/70 GHz Wide Pitch True Differential TDR/VNA Probes

Enlarged side view of pins

Part Numbers

- DVT-FPP40-1MM, DC-40 GHz Differential Probe
- DVT-FPP50-1MM, DC-50 GHz Differential Probe
- DVT-FPP70-1MM, DC-70 GHz Differential Probe

US Patents 10852322, 11175311 (Other patents pending)

Electrical Characteristics

- Differential Probe Connectors/Frequency Ranges: 40 GHz /2.92 mm, 50 GHz /2.4 mm and 70 GHz/1.85 mm
- Fixed Pitch 1 mm (1000 um)
- Linear Roll-off Frequency Response
- Tightly Coupled Fully Balanced Differential Probes
- No Ground Contact Probe Tips
- Easy Setup with Only Two Signal Pins
- Measures: True Differential S-parameters
- 100 Ohm (nominal) Differential Impedance

Mechanical Characteristics

- Rugged Brass/Gold-plated Probe Tips
- Fixed Pitch Signal-to-Signal Probe Tips
- No Ground Pin Required
- Adapters included to mount on Probe Positioners

Instrument Compatibility

TDR, VNA and BERT Scope Instruments

Applications

- Measuring Final PCB Prototype Designs against specifications
- Time, Frequency and Jitter Measurements up to 70 GHz
- 56 GHz Nyquist S-parameter Analysis of PAM4 Designs

(Optional) AtaiTec Probe De-Embedding Kit

- Part #: ISD70-002
- In-Situ De-embedding (ISD) software
  - Models without passivity errors
  - Contains True Differential Coupling
  - Differential Probe De-embedding (S4P)
- Includes ISDXX In-Situ board (40 GHz, 50 GHz, or 70 GHz)
- Technical Support included: http://ataitec.com

Service and Support

- 1 Year Limited Warranty
- Replacement Repair Service

Building a Desktop Dual Time & Frequency Domain Measurement System

To configure a dual desktop probe system

- Connect two DVT-FPP70 70 GHz probes to the end of the probe arm of each DVT-FP250 Probe Positioner.
- Depending on the size of the board, use one or two DVT-CS-3 or DVT-CS-1 cameras to verify the probes are making contact with the probe pads (as small as <20 mils in diameter) and to planarize the probe tips to the test pads. Each USB camera probe image is displayed using its utility software on a PC display to verify that both probes are making contact at the same time. Using two cameras vastly reduces setup times compared to using one camera and repositioning the camera each time you move the probes to a different probing location.
- Use four DVT-SM Holders to secure the corners of your PCB to keep it from moving while probing. You can also remove a segment from two of the holders and place them under the PCB near where it will be probed to keep the board from bowing (At least 6 holders recommended).

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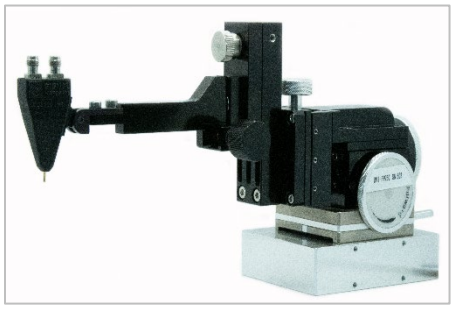
Probe System Components

DVT-FPP70 70 GHz Differential Dual Probe Kit

70 GHz Dual Probe Differential TDR and S-Parameters Probe kit. Contains two fixed differential probes. Includes a copper shorting block for creating probe models.

DVT-FP250 Probe Positioner



Rigid arm probe manipulator with XYZ pitch 40 TPI controls & magnetic base. Recommended for probing with DVT40 and DVT-FPPXX probes.

DVT-CS-1 Camera System

The Camera System is used for the accurate placement of probe tips on the test pads, probe tip planarization and calibration.

DVT-SM Holders

Stackable Magnetic PCB Holders to secure the corners of a PCB to keep it from moving while probing. You can also remove a segment from two of the holders and place them under the PCB near where it will be probed to keep the board from bowing (At least 6 holders recommended).

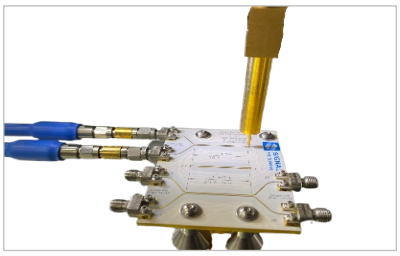
DVT-FP100 Magnetic Bases

DVT-FP100-1IN, DVT-FP100-1.5IN and DVT-FP100-2IN Stackable 1", 1.5" and 2" magnetic blocks used to raise the probe and camera positioners to clear the test board.

DVT-PB100-24 Probe Bridge

A Versatile bridge with magnetic base for probing applications which extends the probe reach to enable probing of larger boards.

ISB40 ISD In-situ board



Benefits of De-embedding

- Wide 1 mm pitch measurements to 70 GHz
- Make real-time Insertion-Loss measurements by de-embedding probe loss from PCB measurements
- Differential (SDD21/SDD22) S-parameter measurements do not require a physical ground
- VNA measurement reference plane is moved to the probe tips