Interconnect Solutions: Adapters, Cable Assemblies, Attenuators, and Tools

Maury Microwave interconnect solutions encompass a broad range of products designed to reduce measurement uncertainties and improve measurement accuracy and repeatability. Cable assembles offer high flexibility and phase stability and the range of available adapters include calibration-grade metrology adapters, color-coded precision adapters that combine high performance with ease-of-identification, and adapters that feature a quick-connect design with a push-on/pull-off capability. Color-coded precision coaxial attenuators reduce signal power without adding distortions, while additional testing tools span connector gage kits to torque wrenches.

Visit info.maurymw.com/ims-2024 to learn more about Maury Microwave solutions.

Product Overview

Cable Assemblies

StabilityVNA™ test port cable assemblies (SV-series) are the industry's highest performing VNA cables. StabilityVNA offers superior amplitude and phase stability with flexure, thereby improving measurement accuracy while reducing measurement uncertainty and increasing confidence in measurements.

StabilityPlus™ phase-stable cable assemblies (SP-series) set the standard for high-performance ruggedized microwave/RF cable assemblies. Designed specifically for phase-stable and amplitude-stable applications, StabilityPlus offers excellent measurement repeatability even after cable flexure.

StabilityFlex™ ultra-flexible cable assemblies (SF-series) are the industry's best flexible daily-use lab cable assembly. Designed for general testing applications, StabilityFlex offers excellent value with its high flexibility and low cost, as well as low insertion loss, and excellent return loss, and its amplitude and phase stability with flexure.

StabilityWafer™ on-wafer probing cable assemblies (SW-series) have been specifically designed to empower accurate and repeatable on-wafer measurements when used with coaxial wafer probes. Its small outer diameter, light weight, superior flexibility, and availability of various connector angles allow for easy routing and minimally impact probe tips mechanically while providing reliable and repeatable RF measurements.

Adapters, Attenuators, and Torque Wrenches

ColorConnect™ color-coded precision adapters (CC-series) have been designed for lab and field use where quality, performance, ease-of-identification, and ease-of-use are critical. Following the IEEE P287 high-frequency connector/adapter color convention, ColorConnect precision adapters offer clear indications of compatibility.

Calibration-grade metrology adapters have been designed as an integral part of the renowned Maury Microwave VNA calibration kits and are also available separately where calibration-grade precision is demanded. Calibration-grade metrology adapters offer the lowest VSWR reducing the mismatch between connected components and are available in both coaxial and waveguide configurations.

Calibration-grade metrology Quick-Test adapters (QT-series) incorporate a quick-connect design that provides for a push-on/pull-off capability. The optional quick 1-1/2 turn twist nut combines the best of both worlds, allowing quick connect or disconnect with the increased accuracy of a thread-on connector.

ColorConnect™ color-coded precision coaxial attenuators (AT-series) are used to reduce the power of an RF, microwave, or mmWave signal without distorting its signal quality/waveform. Attenuators are often used to lower the amplitude of a signal to a measurable level or to protect a measurement instrument from damage.

Torque wrenches (metrology-series and TW-series) are recommended for tightening coaxial connectors in order to obtain optimum repeatability and prolong connector life. They employ a “break” design, so it is impossible to over-torque a coupled junction.

Calibration, Verification, and Gage Kits

Characterized device (CD) SOLT calibration kits improve calibration accuracy when compared to SOLT kits based on polynomial definitions. Each calibration kit is provided with individually characterized short, open, and fixed load standards, whose S-parameters can be loaded into commercial VNAs directly or when used with the Maury Microwave Insight™ software platform.

CD calibration verification kits are designed for 1-port and 2-port VNA calibration validation for well-matched and mismatched DUTs. Each kit comes with individually characterized verification standards and is used for calibration validation by comparing the S-parameters of the appropriate verification standard measured by the user and the S-parameters measured at the factory.

Connector gage kits provide an easy and accurate way to measure critical linear interface dimensions of most coaxial connectors. Identifying recessed, protruding, and non-concentric contact pins will avoid incomplete connections and unrepeatable measurements and prevent damage to mated connectors.