

Maury Microwave Solutions for Satellite Communications Systems

Maury Microwave interconnect solutions, which include cable assemblies and adapters, ensure highly reliable, repeatable measurements for satellite systems. In addition, Maury Microwave offers a wide range of solutions from amplifiers to calibration kits to enable the world's best wireless communication technologies and networks to get better, faster, and stronger.

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Product Overviews:

StabilityTVAC™ Thermal Vacuum Cable Assembly Thermal Vacuum (TVAC) chambers simulate space-like conditions for testing space components. To test devices inside the chamber, specifically designed T&M components and cable assemblies are crucial to withstand the pressure and temperature effects. Changes in vacuum conditions can damage cable assemblies if not properly addressed, requiring connectors with slow pressure changes. Maury's StabilityTVAC™ series employs vented connectors that allow air to escape quickly, enabling rapid pressurization/depressurization cycles and minimizing delays in testing. Cable assemblies in TVAC chambers experience thermal expansion and contraction, which can affect performance and lead to permanent degradation. StabilityTVAC™ cable assemblies undergo thermal conditioning to relieve mechanical stresses, ensuring reliable performance across varying temperatures.

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. With a ruggedized, durable construction, StabilityPlus™ will outlast and outperform other assemblies resulting in a reduced total cost-of-test. StabilityPlus™ is equally suited for daily use with VNAs as well as high-end test instrumentation. StabilityPlus™ employs color-coded connectors to reduce potential for connection mistakes and is available with TNCA, SMA, Type N, 7mm, 3.5mm, 2.92mm, 2.4mm, and 1.85mm connectors up to 67 GHz.

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. StabilityFlex™ is the ideal assembly for reliable and repeatable measurements when used with microwave & RF test instrumentation, including benchtop testing and automated test (ATE) systems. StabilityFlex™ employs color-coded connectors to reduce potential for connection mistakes and is available with SMA, Type N, 2.92mm, and 2.4mm connectors up to 50 GHz.



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. Its superior flexibility and anti-skid band ensures the cables can be arbitrarily positioned with no spring-back or stress on DUTs. Its increased crush resistance and flex cycles enhances longevity and can lead to years of uninterrupted use. StabilityVNA™ employs color-coded connectors to reduce potential for connection mistakes and is available with 7mm, 3.5mm, 2.92mm, 2.4mm, and 1.85mm connectors up to 67 GHz.

Calibration-grade metrology adapters have been designed as an integral part of Maury's renowned vector network analyzer (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 ensuring highest signal flow. Calibration-grade metrology adapters are available with coaxial BNC, TNC, AFTNC, SMA, Type N, 7mm, 3.5mm, 2.92mm, 2.4mm, and 1.85mm connectors up to 67 GHz, as well as with specialized NMD test port connectors and bulkhead connectors. Calibration-grade metrology adapters are available with waveguide-to-coaxial transitions with WR90, WR75, WR62, WR51, WR42, WR34, WR28, and WR22 flanges to 50 GHz in right-angle and end-launch configurations.

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 Maury's Insight™ software platform. When combined with Insight™, users will be able to quantify the uncertainty contribution of their calibration kit to their overall measurements. CD cal kits result in TRL-like accuracy with fixed-load SOLT ease-of-use, and are available with Type N, 7mm, 3.5mm, 2.92mm, and 2.4mm connectors.

Characterized Device (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. When combined with Insight™, users will be able to use overlapping uncertainty boundaries to validate a VNA calibration with increased confidence. Verification kits are available with Type N, 7mm, 3.5mm, 2.92mm, and 2.4mm connectors.

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/adaptor color convention, ColorConnect™ precision adapters offer clear indications of compatibility and intermatability. ColorConnect™ makes it a simple matter to avoid and eliminate damaged equipment, degraded equipment reliability, degraded performance, and lengthy maintenance times due to improper mating (and attempted mating) of incompatible adapters. ColorConnect™ Precision Adapters are available with SMA, Type N, 3.5mm, 2.92mm, 2.4mm, and 1.85mm connectors up to 67 GHz.

