Frequency Response Analyzers

The Venable Family of High Performance Frequency Response Analyzers

All Venable Frequency Response Analyzers combine the latest analog and digital technology with advanced DSP to provide versatile test, measurement and analysis of power supply stability for mission-critical environments. Each single, comprehensive hardware and software system performs many sophisticated test functions, with all Venable models supporting an expanded frequency of 10µHz to 40MHz, with oscillator and channels isolated to 600Vpk, the highest in the test and measurement industry.

350c Series

The **Venable Model 350c** is the 3-channel successor of the original workhorse Model 350a/b that launched in 1986 and established Venable Instruments as a market leader. The contemporary 350c Series incorporates a 3rd channel, allowing the user to measure more transfer functions simultaneously with one sweep, such as source and load impedance. The 350c is the only frequency response analyzer in the industry that can measure absolute phase, using a reference channel.

6300 Series

The **Venable Model 6300 Series** is our popular 2-channel hardware/software system supplying the same functionality as all Venable Frequency Response Analyzers, with the 6300 leading the industry with more integrated testing and measurement capabilities than any other instrument in its class.

7400 Series

The **Venable Model 7400 Series** is the top of the line in Venable performance, supplying 4-channels for increased testing, measurement and analysis functionality. Originally designed for measuring 3-phase AC impedance and source and load simultaneously, the Model 7400 is a robust solution for organizations requiring high availability for high volume and/or simultaneous testing.

8800 Series

The **Venable Model 8800 Series** is the first in our family of digital testing and measurement instruments. The analyzer utilizes the digital interface 'Sync' signal to provide synchronization between analog and digital hardware. The Model 8800 performs simultaneous analysis on both analog input channels and the digital target processor, reliably capturing all data. **Versatile by design, the Model 8800 digital interface can be disabled, via software, to use the analyzer in a standard 2-channel, analog only configuration.**

Accessories

Extended testing and measurement capabilities are made possible with Low Frequency (LF) and General Purpose (GP) Bodes, RLC and IOZ options. Venable offers the only RLC that measures component impedance, and the only IOZ that measures power supply impedance, with 50A or 100A capabilities.

Venable *Stability Analysis™* Software The Next Generation Software from the Creator of K-Factor

In 1983, Venable launched the renowned K-Factor™ Software*, still in use by many instrument manufacturers today. Venable has elevated the original software with its innovative *Stability Analysis™* program. Go straight from measurement to design with *Stability Analysis™,* as its dynamic functionality eliminates lengthy manual value calculations and guesswork. Compensation amplifier synthesis capability, or coefficients for digital power supplies, enables user to achieve the exact feedback loop bandwidth and phase margin desired on the first try. Other enhanced benefits include:

- Venable *Stability Analysis™* is the only software that can change sweep parameters during a sweep
- Venable *Stability Analysis™* is the only software that can easily transfer data between different types of plots
- Venable *Stability Analysis™* is the only software capable of reading component values directly off the plot with reactance plotting
- Venable *Stability Analysis™* is the only software that can measure a digital power stage with our 8800 Digital Frequency Response Analyzer
- Venable pioneered the ability to export data to and from other applications, such as Excel® and MATLAB®
- Overlay multiple tests on one plot to dynamically compare data
- A simple SPICE-like program for modeling the AC frequency response of circuits
- Graph types supported are voltage vs. frequency (log-log), gain phase vs. frequency (semilog), and reactance vs. frequency (log-log with lines for constant capacitance and inductance).
- Venable Reader™ software enables users to share Venable plots and graphs (.ven files) with customers and colleagues, including limited editing capabilities.

*Venable, H. Dean. "The K Factor: A New Mathematical Tool for Stability Analysis and Synthesis." Proc. Powercon 10. 1983. San Diego, CA. pp. H1–1 to H1–12