



Venable Instruments is pleased to introduce the state of the art version of the workhorse Frequency Response Analyzer that helped establish Venable as the market leader. The new **Model 7405** continues to provide many customers with reliable and accurate performance. Enhancements are described below and on the right.

The Venable **Model 7405** Frequency Response Analyzer combines the latest analog and digital technology with advanced DSP to provide versatile test and analysis functions. This single, comprehensive hardware and software system performs many sophisticated test functions and boasts an expanded bandwidth of **10 $\mu$ Hz to 5, 20 or 40MHz** along with 4 input channels protected to 600 Vpk.

The **7405**, combined with Venable's renowned and proprietary K-Factor based software, now known as **Stability Analysis™**, is your most complete, accurate, easy to use system for power supply design. Our Spice™ like modeler and 3 circuit topologies provides the design engineer with a single measurement solution, eliminating trial and error and increasing productivity. Results and graphs are easily exported in jpeg or .ven file format for presentation graphics or off-line number crunching." Others can view the .ven files via our READER, downloadable at no cost. Operating through the industry standard IEEE-488 interface, the Venable system imports/exports to MATLAB™ and Excel™ and saves Bode/Impedance Plots in .jpeg for use in presentation graphics software or .ven file format for number crunching off-line.

Venable Instruments incorporates the latest CPLD technology to unleash the power of a dedicated processor, performing all data acquisition and analysis functions. A separate processor handles all the communication functions. Optimum performance derives from the use of storage within the CPLD, which enables synchronous buffering between the processor and the analog hardware. The **7405** performs simultaneous analysis on all four input channels, reliably capturing all data. This truly versatile instrument, complete with its wide range of applications is available to you packaged in a tough, yet portable case, weighing just 12 pounds. Engineers and scientists now have the speed and technology for production, R&D Labs, academia, or field operations bundled into one compact and affordable system, the Venable **Model 7405**.

Venable, a pioneer in stability analysis for over 35 years, continues to support the test and measurement customers with cutting edge instruments and analysis software.

*"World Leader in Stability Analysis Systems and Engineering"*

**Description:**

Generator:

Frequency Range:	<b>Venable 7400 Series, 4 channel, 5, 20 and 40MHz Models</b> 10 $\mu$ Hz to 5, 20 or 40MHz (sine wave) 10 $\mu$ Hz to 1MHz (square wave)
AC Amplitude	1mV to 10V
DC Bias	$\pm$ 10V, 10mV Steps
Modes:	Single Frequency, sine sweep, and linear sweep steps
Log Sweep	0.1 – 2000 Steps per decade 10 $\mu$ Hz – 5MHz step
Output Amplitude	Dynamically adjust output to maintain a constant input level through Venable software servo
Compression:	Switchable 50 ohms/2 ohms
Output Impedance:	Single-ended floating
Output configuration:	600V
Isolation from Chassis Ground:	

Analyzer:

Measurement frequency range:	10 $\mu$ Hz to 5, 20 or 40MHz
Input Configuration:	Single-ended floating (600V)
Input impedance selectable:	50 ohms or 1 Meg ohm (default)
Measurement Accuracy:	$\pm$ 0.03dB + .1dB/MHz; $\pm$ 0.4deg + 1deg/MHz
Measurement Technique	Narrowband DFT
Delay Time: 0-100 sec	
Integration Time: 20msec to 100ksec	
Integration Cycles: 1-9999 cycles	
Input coupling:	DC, automatic DC offset cancellation
Input Range:	10mV to 500Vpk Full Scale in 11 ranges, Auto-ranging
Dynamic Range:	120 dB
CMRR/IMRR:	120 dB
Max. Input	$\pm$ 500Vpk
Max Input Withstand Voltage	$\pm$ 600Vpk
Over-range alarms	LED indicator

System:

PC Interface:	IEEE-488 standard interface for Windows in USB 2.0
Auxiliary Output:	12Vdc/400mA 4.8W for accessories
Application software:	Venable Stability Analysis™ v5 for WinXP/7, 8 & 10
Real time display update	Each point is plotted as acquired
Data Analysis:	Gain margin, phase margin, impedance; Components: R, L, C, Z
Power Requirements:	90 to 264Vac, 48 to 62Hz, 30VA
Weight/Dimensions	12 Lbs. - 17"x10"x3.5"



Front View



Back View



Rack Mount View

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