



**Venable Instruments is pleased to introduce the next generation** of precision measurement solutions for power supply design.

The Venable **Model 6305** 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 **10μHz to 5, 20 or 40MHz** along with 2 input channels protected to 600 Vpk.

Venable's renowned K-Factor based software, is now known as **Stability Analysis™** v5.1. The **6305** is your most complete, accurate and easy to use system for phase/gain and impedance measurements. 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 **6305** performs simultaneous analysis on both 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 6305**.

Venable, a pioneer in stability analysis for over 30 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:

AC Amplitude

DC Bias

Modes:

Log Sweep

Output Amplitude

Compression:

Output Impedance:

Output configuration:

Isolation from Chassis Ground: 600V

##### Analyzer:

Measurement frequency range:

Input Configuration:

Input impedance selectable: 50 ohms or 1 Meg ohm (default)

Measurement Accuracy:

Measurement Technique

Delay Time: 0-100 sec

Integration Time: 20msec to 100ksec

Integration Cycles: 1-9999 cycles

Input coupling:

Input Range:

Dynamic Range:

CMRR/IMRR:

Max. Input

Max Input Withstand Voltage

Over-range alarms

##### System:

PC Interface:

Auxiliary Output:

Application software:

Real time display update

Data Analysis:

Power Requirements:

Weight/Dimensions

#### **Venable 6300 Series, 2 channel 5, 20 and 40MHz Models**

10μHz to 5, 20 or 40MHz (sine wave)

10μHz to 1MHz (square wave)

1mV to 10V

±10V, 10mV Steps

Single Frequency, sine sweep,  
and linear sweep steps

0.1 – 2000 Steps per decade

10μHz – 5MHz step

Dynamically adjust output to  
maintain a constant input level  
through Venable software servo

Switchable 50 ohms/2 ohms

Single-ended floating

10μHz to 5, 20 or 40MHz

Single-ended floating (600V)

± 0.03dB + .1dB/MHz;  
± 0.4deg + 1deg/MHz

Narrowband DFT

DC, automatic DC offset  
cancellation

10mV to 500Vpk Full Scale in  
11 ranges, Auto-ranging

120 dB

120 dB

±500Vpk

±600Vpk

LED indicator

IEEE-488 standard interface for  
Windows in USB 2.0

12Vdc/400mA 4.8W for accessories  
Venable Stability Analysis™ v5 for  
WinXP/7, 8 & 10

Each point is plotted as acquired  
Gain margin, phase margin,  
impedance; Components: R, L, C, Z

90 to 264Vac, 48 to 62Hz, 30VA

12 Lbs. - 17"x10"x3.5"



Front View



Back View



Rack Mount View

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