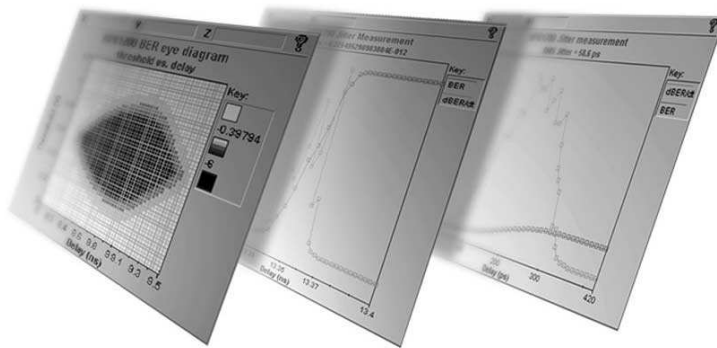


Agilent E4874A

Characterization Software Components for the Agilent 81200 Data Generator/ Analyzer Platform

Data Sheet



Key Features

- Automation of characterization measurements with the Agilent 81200
- Selection of engineering templates and ActiveX graphic control components for Agilent VEE, Labview, MS Visual C++, and MS Excel Vba
- Graphical results for shmoo plots, jitter, and eye diagram measurements
- Simple integration and control of additional external instruments

Automate your characterization measurements

Characterizing digital components is usually a very time-consuming task. However, the Agilent Technologies E4874A Characterization Software Components provide the tools for setting up an automated characterization task quickly and with ease. Using the examples of the E4874A, you can create your test function in the software environment that best suits you: Labview or Agilent VEE, MS Visual C++, or even MS Excel spreadsheets with Visual Basic.

Simplify the integration and control of other instruments

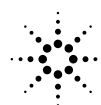
The Agilent E4874A simplifies the integration and control of other test instruments, such as power supplies, parametric measurement units, or oscilloscopes (via GPIB, LAN, or the VXI interface). In addition, the programming of your test setup is simplified with the Agilent 81200 Plug & Play drivers.

The E4874A is a selection of common engineering test templates and ActiveX graphic control components.

The automated parameter sweep creates for example, shmoo plots, which show you the device performance in two-dimensions immediately, while at the same time defining the specification limits. You can easily tailor the supplied templates to your own needs to include the integration of other test instruments, using their drivers.

The Agilent 81200 Data Generator/ Analyzer Platform in Brief

The Agilent 81200 provides stimulus and response capabilities in one platform. It is freely configurable to your own needs, with up to 120 (240) channels as well as a stand-alone data generator and a platform with any combination of analyzers and generators. With up to 1 Mbit memory depth per channel and a frequency range of up to 660 MHz, the Agilent 81200 is the ideal tool throughout the design verification and characterization process: from initial start-up through operational check and the characterization of design margins, to the detailed analysis of problems or critical parts of your design.



Agilent Technologies

General Overview

The Agilent E4874A Characterization Software Components are examples that facilitate the set up of measurements with parameter sweeps. They are based on real applications and have been extensively tested. The user can modify and extend the examples, tailoring them to the needs of the measurement task. The E4874A consists of:

1. Templates, containing an input and measurement section, performing a dual parameter sweep written under:
2. A graph control component, using the ActiveX interface.

Contents of Agilent E4874A

The following are examples of different measurements available in the package:

- **Fast Shmoo Plot**

A two-dimensional sweep over power supply voltage and test frequency, using the 81200 Data Generator/Analyzer Platform, an external GPIB controlled power supply, using a fast sweep algorithm to reduce the test time. Please see Figure 1.

- **Bit-Error-Rate Eye Diagram**

A two-dimensional sweep over the sampling delay and thresholds, using the 81200. The result is shown graphically as an Eye Diagram. Please see Figure 2.

- **Jitter Measurement**

Parameter sweep over the sampling delay, using the 81200. The result is shown as a Gaussian curve and standard deviation, which corresponds to the RMS jitter of the sampled edge. Please see Figure 3.

To find out which examples run in which software environment, please refer to Table 1.

System requirements

- PC CPU: Pentium Processor
- Windows NT 4.0®
- VISA Version G.02.01.00
- Agilent 81200 Plug & Play drivers
- Agilent E4873A User Software version 2.0 (includes 81200 Plug & Play drivers)

All of the above mentioned requirements are already installed on a standard Agilent 81200 system.

In addition, the user of the Agilent E4874A Characterization Software Components must install the software environment, in which the user wants to work. The requirements are as follows:

- Agilent VEE
- Labview
- MS Visual C++ version 5.x
- MS Excel Vba (Vba = Visual Basic for applications)
- MS Office 97

Table 1: Examples included in the Agilent E4874A Characterization Software Components

	Fast Shmoo	Eye Diagram	Jitter Measurement
Agilent VEE		X	X
Labview		X	X
MS Visual C++	X	X	X
MS Excel Vba	X	X	X

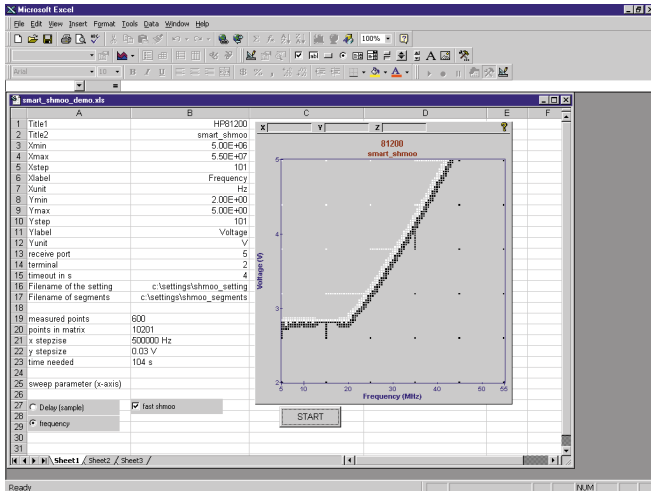


Figure 1: Fast Shmoo Plot example for MS Excel

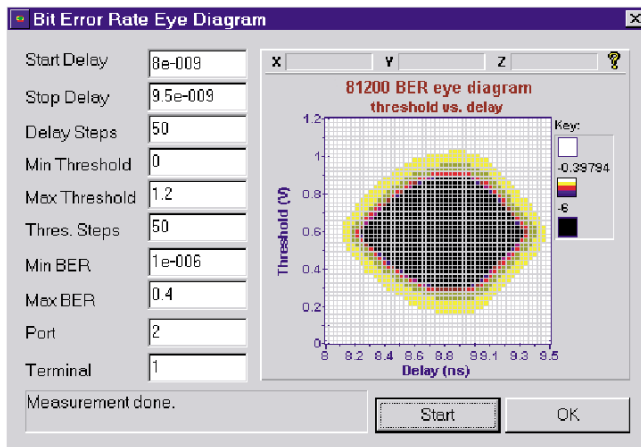


Figure 2: Eye Diagram Measurement example for MS Visual C++

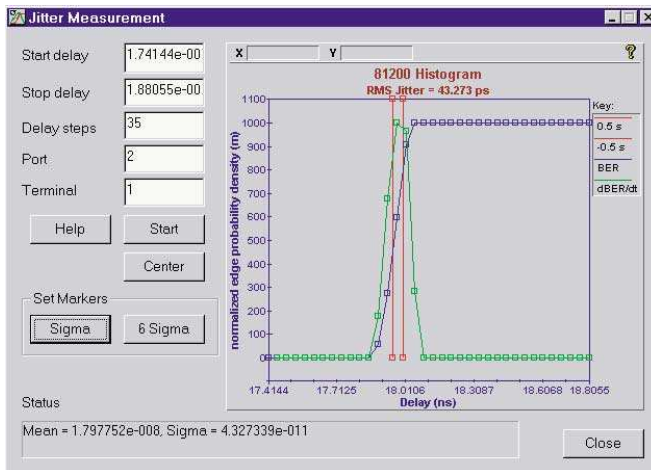


Figure 3: Jitter Measurement example for MS Visual C++

Related Literature

	Pub. Number
<i>Agilent 81200 Data Generator/Analyzer Platform</i> , brochure	5980-0488E
<i>Agilent 81200 Data Generator/Analyzer Platform</i> , data sheet	5965-3415E
<i>Agilent 81200 Data Generator/Analyzer Platform</i> , configuration guide	5965-3417E
<i>BestLink/81200 Simulation Data Link for the Agilent 81200 Data Generator/Analyzer Platform</i> , product information	5968-2548E
<i>Data Transfer between Design, Simulation, and the Agilent 81200</i> , product note	5967-6276E
<i>Flat Panel Display Link Test</i> , product note	5968-8028E
<i>How to Use the Agilent 81200 Data Generator/Analyzer Platform Together with Agilent VEE for Signal Integrity Analysis</i> , product note	5968-3857E
<i>Agilent E4839A Test Fixture</i> , data sheet	5968-3580E

For more information, please visit
www.agilent.com/find/81200_overview

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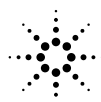
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