Product Specification

LMS-802DX
Lab Brick® Synthesized Signal Generator

Features/Benefits

- **> Cost effective, fast switching signal generator**
- **> Includes GUI, Windows and Linux SDK, LabVIEW driver**
- **> 80 dB of Power Control range**
- **> Superior Harmonic performance**
- **> Fast internal and external Pulse Modulation**
- **> Selectable internal/external 10 MHz Reference**
- **> Phase Continuous Frequency Sweep (LFM)**
- **> Operates autonomously from an unsupervised USB power source or battery pack**
- **> Extremely Energy efficient design**
- **> Easily portable at less than 1 pound**
- **> Sized to fit into a single rack unit for ATE applications**

Overview

The Lab Brick LMS series of synthesized signal generators bring affordability, functionality and simplicity to the microwave test bench. The LMS series covers from .5 MHz up to 20 GHz with 100 Hz frequency resolution, 100 us frequency switching and +10 dBm output with up to 80 dB of output level control. They offer advanced features such as linear frequency sweeping, internal/external 10 MHz reference and optional pulse modulation.

Each Lab Brick Signal Generator is shipped with a memory stick containing the easy to use Graphical User Interface (GUI). Simply plug the Lab Brick LMS Signal Generator into any USB port and open the GUI. Alternatively, for users wishing to develop their own interface, Vaunix supplies LabVIEW compatible drivers, Windows API DLL and a Linux API DLL files with instruction manuals.

Every Lab Brick Signal Generator is also equipped with the autonomous operation feature. Autonomous mode allows the signal generator to operate in the absence of a USB host. Plug into a USB compatible power source to begin operation in a user defined state.

Lab Brick Signal Generators are a fast, easy to use and cost-effective solution to your signal generation needs.

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www.Vaunix.com

Specifications

Models

- **LMS-802DX: 2 to 8 GHz**

Electrical

- **Frequency Resolution: 100 Hz**
- **Frequency Accuracy: +/- 2ppm**
- **Frequency Switching : 100 microseconds**
- **Output Power Range: +10 to -70 dBm**
- **Output Power Resolution: 0.5 dB**
- **Output Power Accuracy: +/- 0.75 dB at +10 dBm**
  +/- 2.5 dB full range
- **RF On/Off Isolation: >80 dB**
- **Spurious: -80 dBc typical, -70 dBc max**
- **Harmonics: -40 dBc typical (at +10 dBm Output), -30 dBc max.**
- **SubHarmonics: None**
- **Output VSWR: 1.5:1 typical**
- **Phase Noise (typ): LMS-802DX**
  - **1 kHz -80 dBc/Hz**
  - **10 kHz -81 dBc/Hz**
  - **100 kHz -86 dBc/Hz**
  - **1 MHz -118 dBc/Hz**
- **Internal/External Reference: Selectable**
- **Reference Frequency: 10 MHz**
- **Reference Input Level: 500mV to 3V Peak to Peak**
- **Reference Ouptut Level: 1.5V Peak to Peak typical**
- **Phase Continuous Linear Frequency Sweep (LFM)**
  - **Frequency Range: 2-4 GHz, 4-8 GHz**
  - **Sweep Time: 1 ms to 1000 seconds**
  - **Sweep Direction: Up, Down, Bidirectional**

Notes:
[1] See phase noise plots for typical performance across frequency

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Electrical - continued

- **Pulse Modulation:** **Optional**
- **Pulse Depth:** **-70 dBc typical, -60 dBc min**
- **Rise/Fall Time:** **30 ns typical**
- **Internal Pulse Mode**
  - **Pulse Width:** **100 ns min**
  - **PRI:** **100 ns plus Pulse Width**
  - **Resolution:** **100 ns**
  - **Trigger Output:** **0 - 5 Volts**
- **External Pulse Mod**
  - **Pulse Width:** **100 ns min.**
  - **PRI:** **100 ns plus Pulse Width**
  - **Trigger Input:** **0 - 5 Volts nom, 0-3 Volts min**
  - **Pulse Delay:** **70 ns typical**

Power Requirements

- **Powered from USB Connection**
- **5 Volts - 650 mA**

Environmental

- **Operating Temperature: 0°C to 50°C**
- **Relative Humidity: <95% (non-condensing)**

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Dimensions

- **Length: 4.90 in. (124mm)**
- **Width: 3.14 in. (80mm)**
- **Height: 1.59 in. (40mm)**
- **Weight: <1 lbs (<0.45Kg)**

Physical Connections

- **Power & Control: USB Type B - female**
- **RF Output: SMA - female**
- **External Reference: BNC- female**
- **Pulse Modulation: BNC - female**
- **Mounting: Counter-bore Through Holes (2), compatible with #6 Socket Head Screws**

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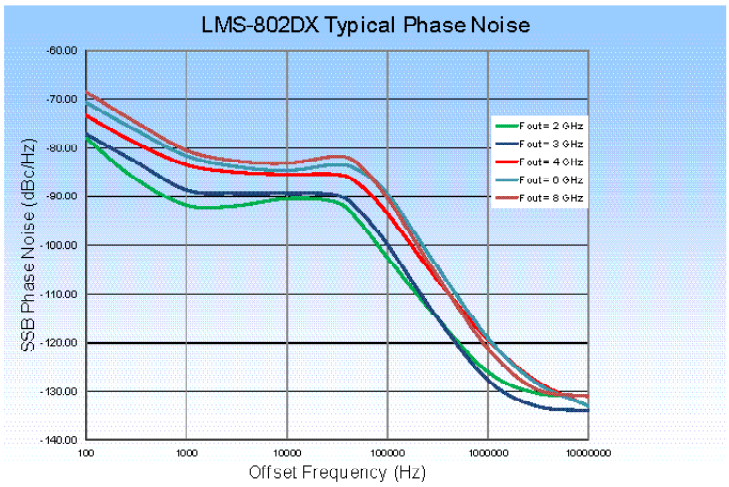

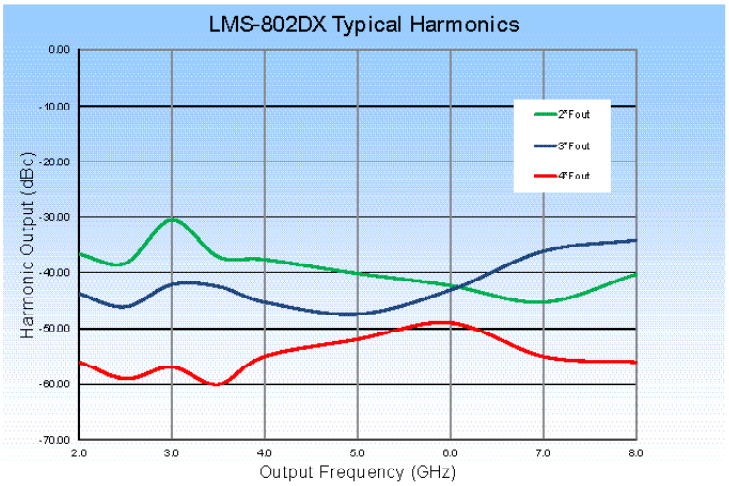

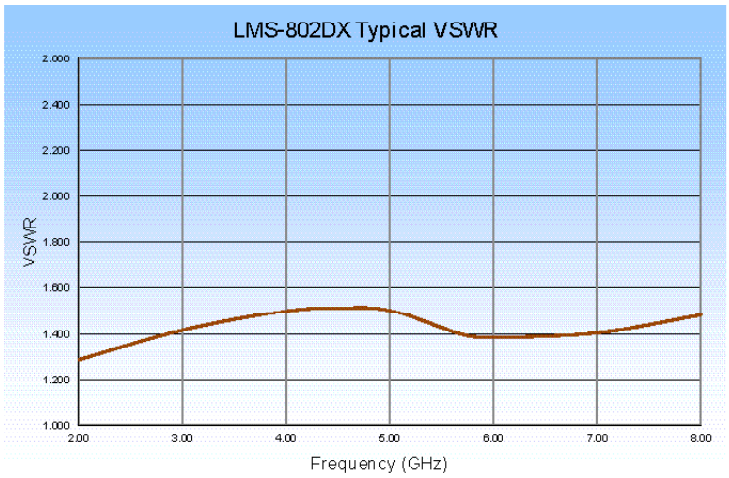

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