

Curve Tracer

GS820 Multichannel Source Measure Unit + 765670 Curve Tracer Software

The screenshot shows the GS820 Curve Tracer software interface. The main window displays a graph of Drain Current Id(A) versus Drain-Source Voltage(V) for a FET Id-Vds. The graph shows several curves representing different operating conditions. The interface includes several control panels:

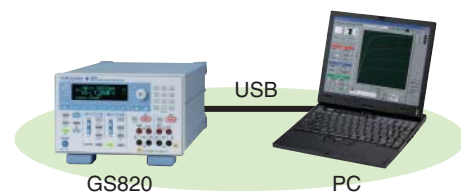
- SAVE Setup**: Save setup parameters.
- LOAD Setup**: Load setup parameters.
- VISA name**: USB0::0x0B21::0x002C::91G817943::INSTR.
- CONNECT**: Connect to the device.
- SWEEP**: Sweep button.
- Repeat**: Repeat button.
- Rate**: Graph update rate (0.176 s).
- Parameter display**: Display of various parameters like DV, -100mV, -200mV, -300mV.
- SWEEP**: Start (1.00000m V), Stop (5.00000 V), Range (Fixed), Wiring (2Wire), Response (Normal), Limiter (200.000m A).
- MEASURE**: Range(A) (20mA), Delay (100us), AutoZero (Off), IntegralTime (0.001PLC).
- SUB-CONDITION**: LevelList (0, -100.000m, -200.000m, -300.000m), Wiring (2Wire), Response (Normal), Limiter (200.000m A).
- Cursor features**: X and Y cursor coordinates.
- Zoom and scroll**: Zoom and scroll controls.
- Control buttons**: CAL, PRINT Screen, SAVE Data, LOAD Data, Reference, CREATE, CLEAR.

Product Overview

This product is a high-speed, high-accuracy real-time V-I curve tracer that consists of the GS820 Multichannel Source Measure Unit and the 765670 Curve Tracer Software. It is particularly well-suited to DC parametric tests of minute signals.

Simple system configuration, easy connection, compact, and light

This system is configured by connecting the GS820 Source Measure Unit to a PC that contains the 765670 Curve Tracer Software via USB. You can perform high-speed, high-accuracy curve tracing despite its compact size, light weight, and simple system configuration.



Real-time, High-Speed Drawing

The GS820's high-speed communication and sweep features allow high-speed graph update rate up to 20 pages/s. You can use the real-time curve tracer with comfort.

Drawing Speed (Reference values)

Plot Points	Graph Update Rate (s)	Drawing Rate (times/s)
20	0.05	20
50	0.07	15
100	0.11	9
200	0.19	5

Conditions: CPU: 1.5 GHz, USB 2.0, using LabView.
GS820 measurement integration time: 0.001 PLC (Power Line Cycle)

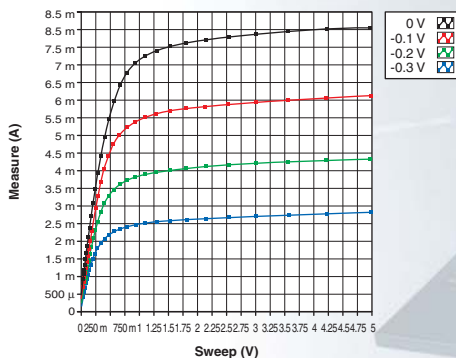
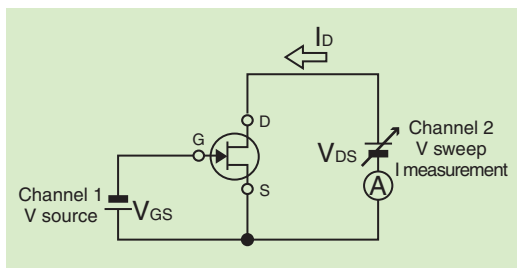
Field of Applications

- Discrete semiconductors such as transistors and diodes
- Analog ICs such as voltage regulators and op-amps
- MOS logic and other digital ICs
- LEDs and other optical devices
- Solar battery cells

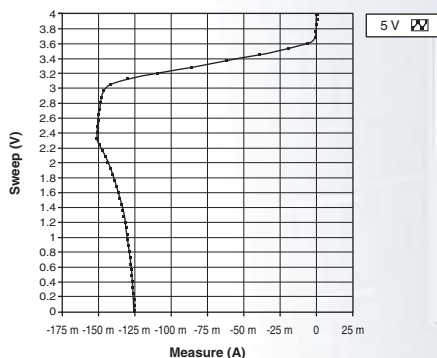
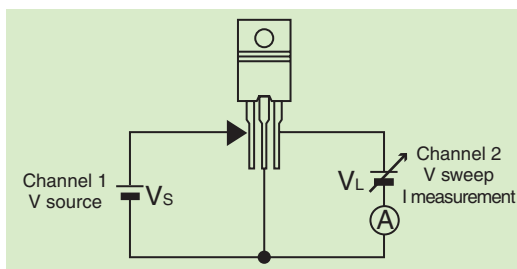
Bulletin 7656-70E

Examples of Measurements of Characteristics

- FETs
V_{DS}-I_D characteristics



- Voltage regulators
Drooping characteristics



Specifications

Specifications

- Graph drawing:**
 - Voltage vs. current, voltage vs. voltage, gain vs. voltage, voltage vs. timestamp, current vs. voltage, current vs. current, gain vs. current, current vs. timestamp
 - Sweep axis: Voltage source or current source
 - Measurement axis: Voltage measurement or current measurement
 - Parameter: Voltage source or current source
 - Sweep shape: Ramp (linear or log), triangle (linear or log), rectangle
 - Sweep points: 5, 10, 20, 50, 100, 200, 1000
 - Scaling: Auto scale or fixed scale
 - Averaging count: 2 to 100

- Analysis feature:** Cursor, zoom & scroll, reference curve designation

- File operations:** CSV data storage and loading, graphic image storage, panel image storage, setup storage and recall

System requirements

- PC**
 - Memory: 512 MB or more
 - HDD: Free space of 1 GB or more
- Operating system**
 - Windows 2000 Professional (SP3 or later), Windows XP Home Edition, Windows XP Professional, or Windows Vista
- USB interface**
 - One USB 1.1 or USB 2.0 port.
- USB cable**
 - One USB 1.1 or USB 2.0 A-B cable for connecting the GS820 to a PC.
- Monitor and mouse**
 - Compatible with the operating systems listed above.
- GS820**
 - 765601 standard model or 765602 digital I/O installed model.
 - The firmware version must be 1.04 or later to use the measurement auto range feature with this software.
 - The detailed GS820 specifications are contained in the GS820 catalog (Bulletin 7656-00E).

Models and Suffix Codes

Model	Suffix Code	Description
765670	-E	Curve Tracer Software English Version 1 license
765601		GS820 Multichannel Source Measure Unit Standard Model
765602		GS820 Multichannel Source Measure Unit Digital I/O Installed Model
A1421WL		USB2.0 cable

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