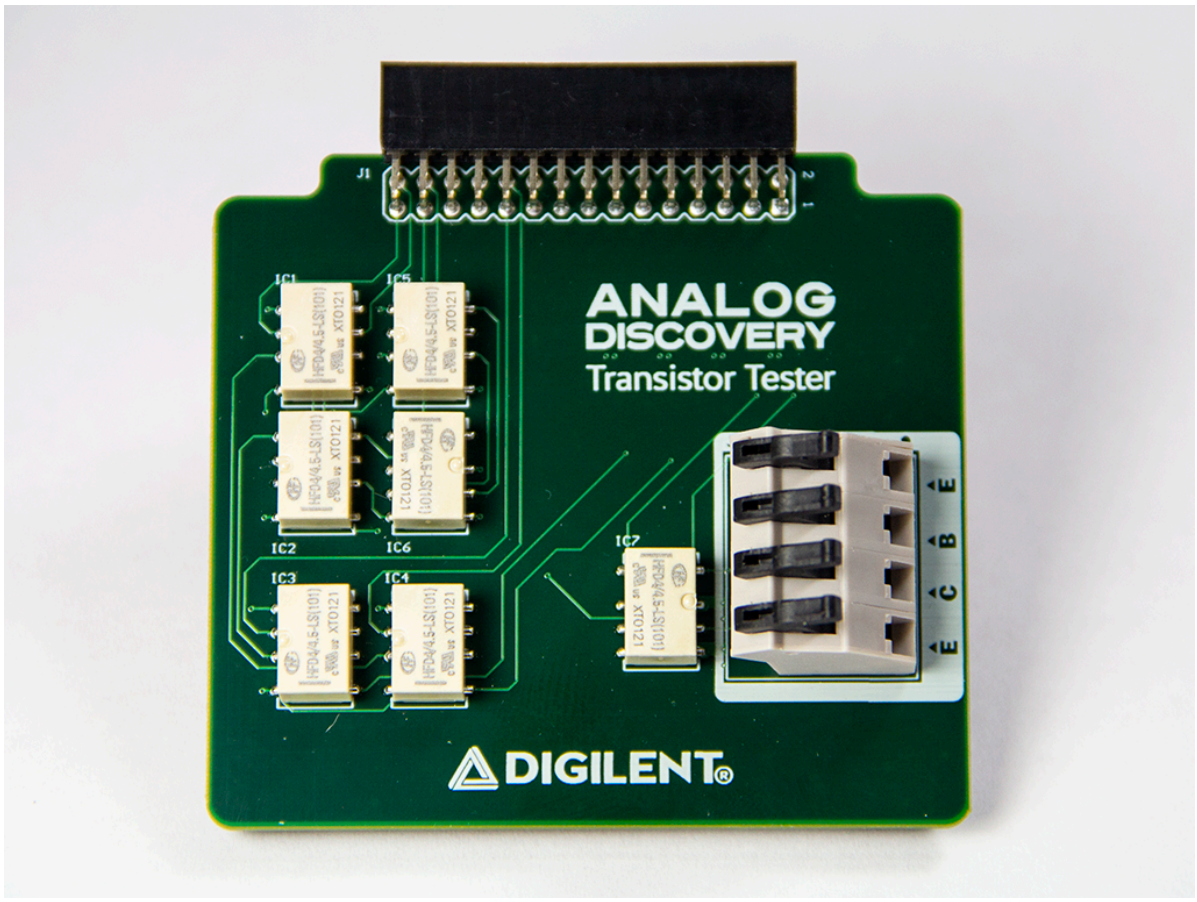
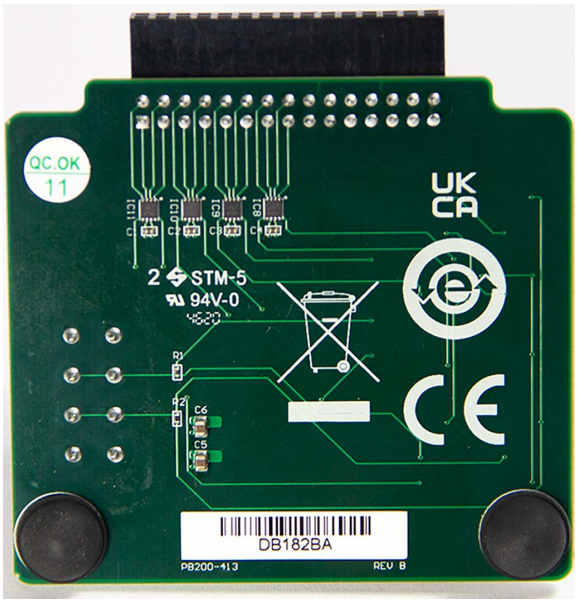
Transistor Tester Adapter Reference Manual

The Transistor Tester Adapter is a module that allows you to add the functionality of curve tracer to your test equipment suite. The Transistor Tester Adapter allows you to analyze the characteristics of discrete semiconductor devices like diodes, NPN and PNP transistors, and both P-Type and N-Type FETs. The Transistor Tester Adapter is equipped with the 2×15 MTE Connector, which makes it compatible with the Analog Discovery Legacy, Analog Discovery 2, and Analog Discovery 3.





Overview

Features

- Works with diodes, NPN and PNP transistors, and P- and N-Type FETs
- Connector J2 for E / C / B / E connections
- 10 kΩ Internal Resistor for Rb
- 100 Ω Internal Resistor for Rc
- Compatible with the Analog Discovery 2 and Analog Discovery (Legacy)
- 2×15 MTE Connector

Compatible Products

The Analog Discovery Transistor Tester Adapter is compatible with the following:

- Analog Discovery 3 (https://digilent.com/reference/test-and-measurement/analog-discovery-3/start)
- Analog Discovery 2 (https://digilent.com/reference/test-and-measurement/analog-discovery-2/start)
- Analog Discovery (Legacy)

Functional Description

A Transistor Tester is also known as a curve tracer and the Transistor Tester Adapter is used to add curve tracer capability to your set of tools. A Curve Tracer plots the current (I) versus voltage (V) to create an I-V curve for an electronic device. The Transistor Tester allows you to create I-V curves for a variety of discrete semiconductor devices, like diodes and transistors. The Transistor Tester will vary the voltage at the base of the transistor and measure the current response to create a graph like the one below.

Connectors and Jumpers

Label	Name	Description
J1	2×15 MTE Connector	Interfaces the Transistor Tester with the Analog Discovery
J2	4 Position Terminal Block	E / C / B / E connections for the Device Under Test

Power

The device doesn't require any external power supply.

Additional Information

The Analog Discovery Transistor Tester Adapter is controlled with the Analog Discovery through the use of WaveForms.

- WaveForms can be downloaded from the WaveForms Resource Center (https://digilent.com/reference/software/waveforms/waveforms-3/start).
- Transistor Tester Adapter Schematic (https://digilent.com/reference/_media/reference/test-and-measurement/transistor-tester-adapter/analog_discovery_transistor_adapter_sch.pdf)

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