Power Transistor Tester

# Introduction

The idea is to create an automated tester for power transistors. The automated test system (ATS) will be comprised of a unit under test (UUT) board, a power source, and a digital oscilloscope.

# Block Diagram



# Test Description

Each component will be tested in four (4) phases.

**Burn-In:** Multiple transitions from no load to maximum load.

**Nominal Performance:** Constant performance at 80% rated load.

**Maximum Performance:** Constant performance at 100% rated load.

**Stress-Out:** Ramped performance until component fails.

A report will be created after each component completes testing.

# Target Performance Parameters

**Maximum current:** 300A.

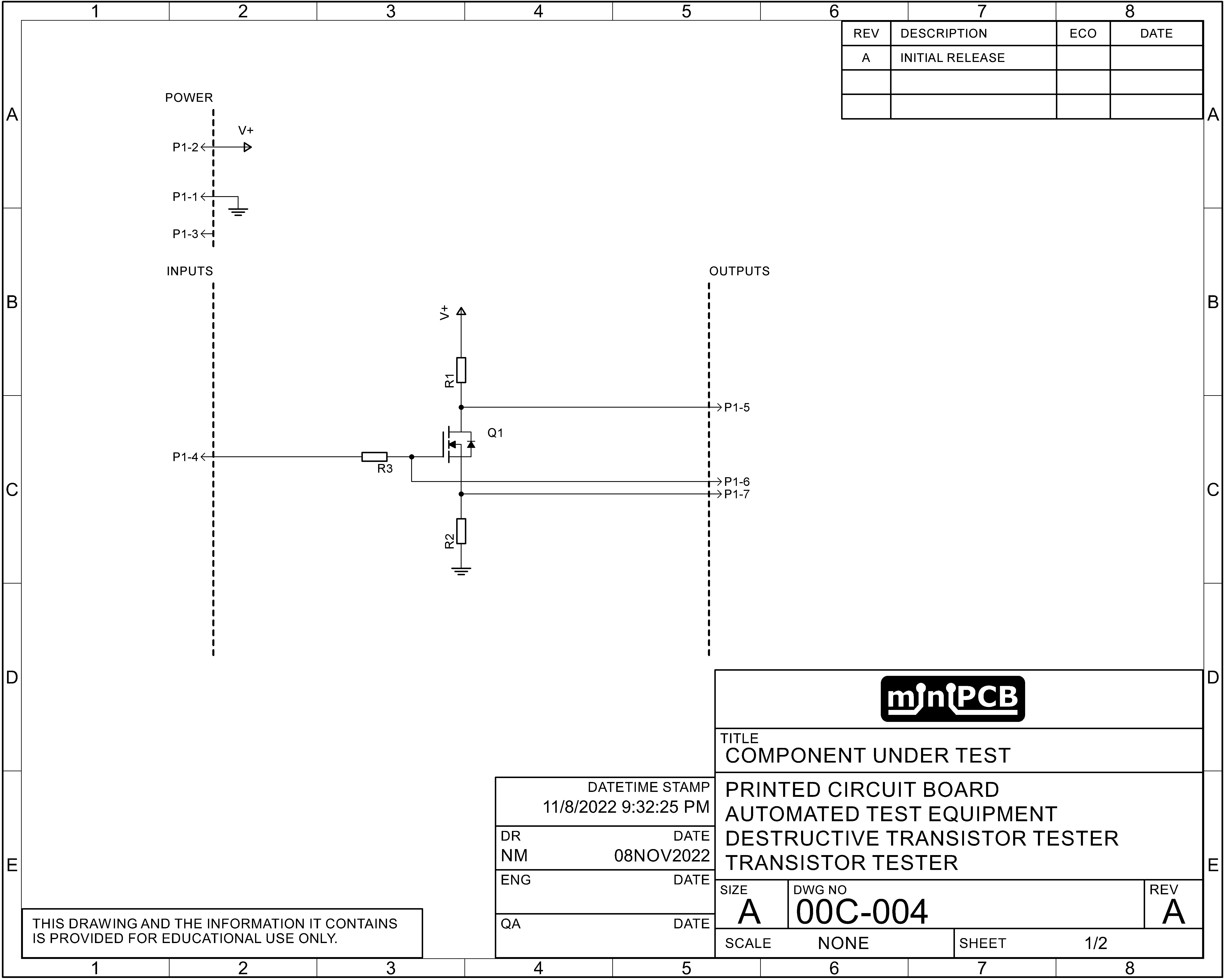
**Maximum test duration:** 15 minutes

**Test profile:** Adjustable

# Test Parameters

* Voltage across transistor Drain and Source.
* Voltage across transistor Gate and Source.
* Current through transistor Drain and Source
* Current on/off Gate during switch event.

# Schematic: Component Under Test



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# Revision History

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| REV | DESCRIPTION | ECO | DATE |
| A | Initial Release | N/A | 08NOV2022 |
| B | Added information after watching IMSAI Guy #1312 Transistor Curve Tracer Basics (YouTube video). | N/A | 17NOV2022 |
| C | Updated block diagram and revised content. | N/A | 05NOV2023 |