

Power Evaluation Board

1. Power Evaluation Board Overview

The Power Evaluation Board [Part number # IPEVK1002] is Ideal Power's evaluation platform developed to support laboratory testing of B-TRAN[®] based circuit protection solutions. The board provides a practical high-voltage power-stage interface for customers evaluating B-TRAN[®] technology in applications such as Solid State Circuit Breaker (SSCB), EV Battery Disconnect Unit (BDU), DC microgrid, Battery Energy Storage Systems (BESS), industrial power systems, and other bidirectional power static applications.

The board is intended to help customers move from device-level analysis to structured platform evaluation by providing the required power connections, SSCB platform interface, inductor interface, capacitor connection points, and measurement access needed for controlled switching tests.

2. Evaluation Purpose

Power Evaluation Board enables customers to evaluate B-TRAN[®] switching behavior in a controlled laboratory environment. Typical evaluation activities may include:

- Switching waveform capture
- Voltage and current transient observation
- SSCB-board evaluation
- Evaluation of external bus capacitance effects
- Inductor based switching tests

The platform is designed for engineering evaluation and is not intended as a production product.

3. Typical Evaluation Setup

A typical test setup includes:

- Power Evaluation Board [IPEVK1002]
- B-TRAN[®] based circuit protection solution
- 24 V auxiliary supply for driver/control electronics
- High-voltage DC supply

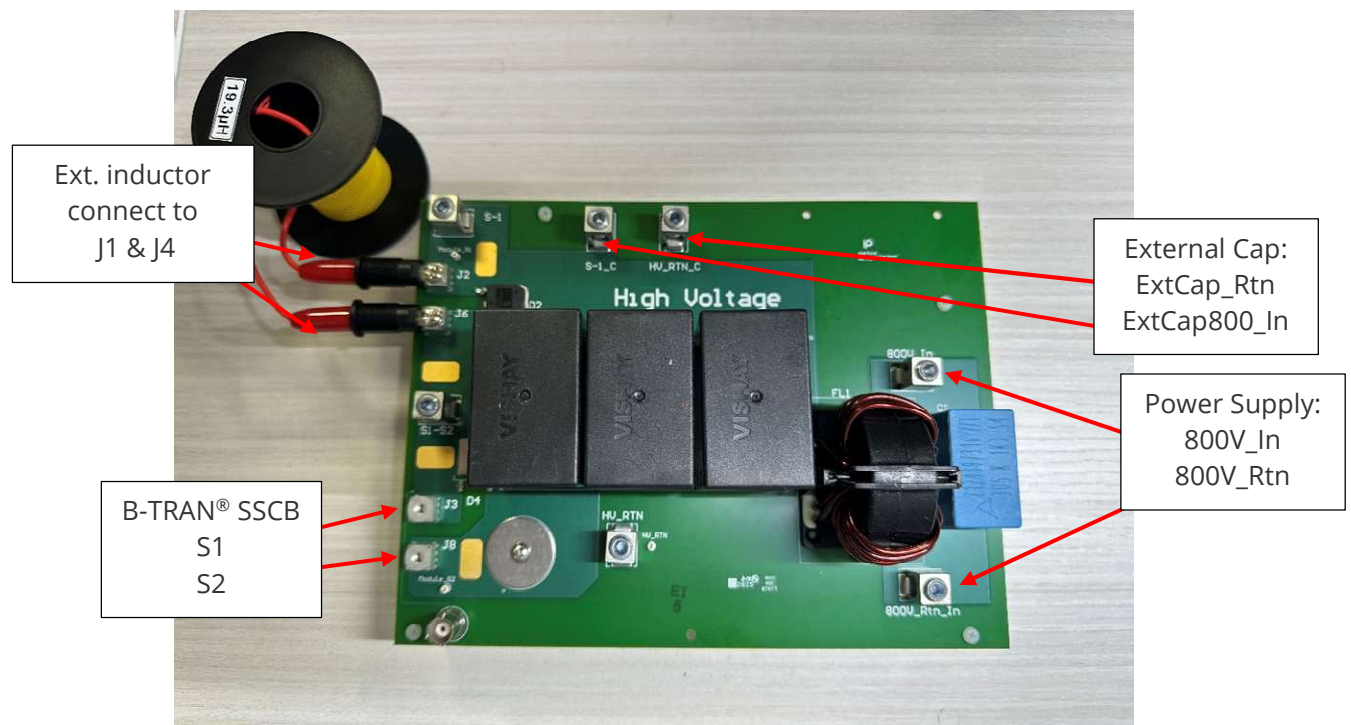


- External inductor
- Optional external DC bus capacitors
- Oscilloscope
- High-voltage differential probe
- Current probe or current measurement method

4. Key Evaluation Interfaces

The board provides connection points and access for:

- High-voltage DC input and return
- External DC bus capacitor connection
- External inductor connection
- B-TRAN[®] based circuit protection solutions power terminals
- S1–S2 voltage measurement
- Current measurement path



5. Important Safety Note

The Power Evaluation Board is intended for qualified high-voltage power electronics personnel only. Testing may involve hazardous voltage and stored energy. Customers are responsible for implementing appropriate laboratory safety procedures, high-voltage measurement practices, discharge methods, current limits, thermal monitoring, and protection procedures before energizing the system.

For additional information, please contact Ideal Power Sales sales@ideалpower.com

