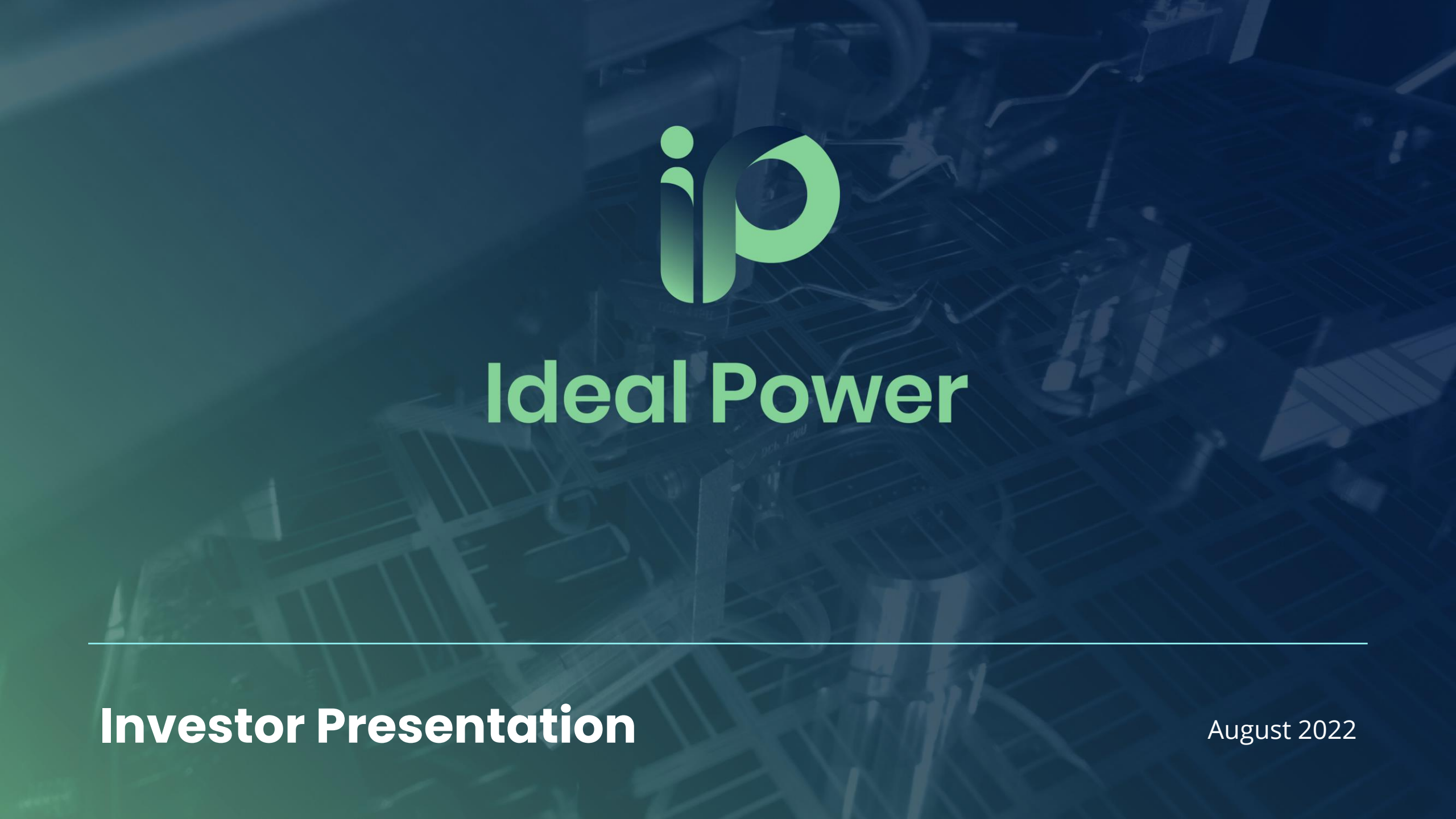

Ideal Power

Investor Presentation

August 2022

Safe Harbor

All statements in this presentation that are not based on historical fact are "forward looking statements." While management has based any forward looking statements included in this presentation on its current expectations, the information on which such expectations were based may change.

These forward looking statements rely on a number of assumptions concerning future events and are subject to a number of risks, uncertainties and other factors, many of which are outside of our control, that could cause actual results to materially differ from such statements.

Such risks, uncertainties, and other factors include, but are not limited to, whether the patents for our technology provide adequate protection and whether we can be successful in maintaining, enforcing and defending our patents, whether demand for our products, which we believe are disruptive, will develop and whether we can compete successfully with other manufacturers and suppliers of power semiconductor products, both now and in the future, as new products are developed and marketed.

Furthermore, we operate in a highly competitive and rapidly changing environment where new and unanticipated risks may arise. Accordingly, investors should not place any reliance on forward looking statements as a prediction of actual results. We disclaim any intention to, and undertake no obligation to, update or revise forward looking statements.

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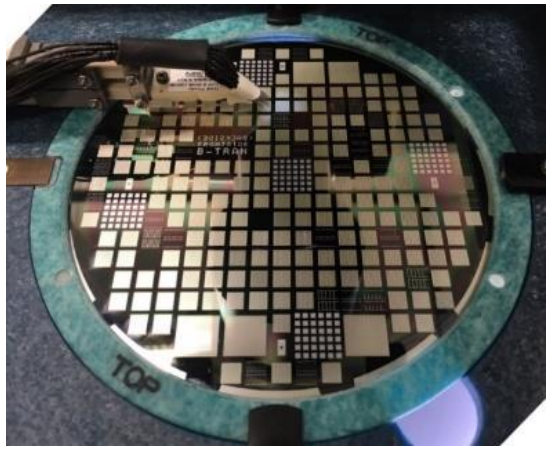
Investment Highlights

- Disruptive Semiconductor Architecture Technology
- Bidirectional, Low Loss Semiconductor Switch
- Broad Patent Estate – 69 Issued & 23 Pending
- Large Growth Markets – EV, Renewables
- Fabless Model, Strong Balance Sheet
- Building Strategic Relationships for Commercialization



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What is B-TRAN™?

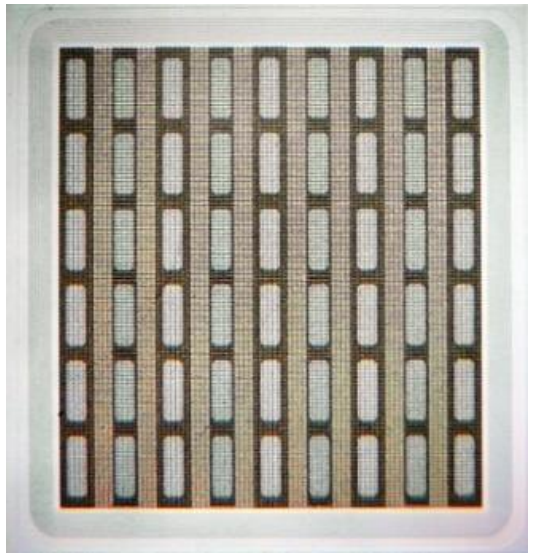
B-TRAN™ is a proprietary semiconductor power switch

- New, disruptive design (architecture)
- Fabrication of both sides of wafers

B-TRAN™ Architecture has 3 compelling advantages

- Bidirectional switching
- Lower losses = lower user costs
- Smaller, lower cost product designs

Critical performance characteristics demonstrated and first devices shipped



B-TRAN™ Will Address Many Power Switching Needs

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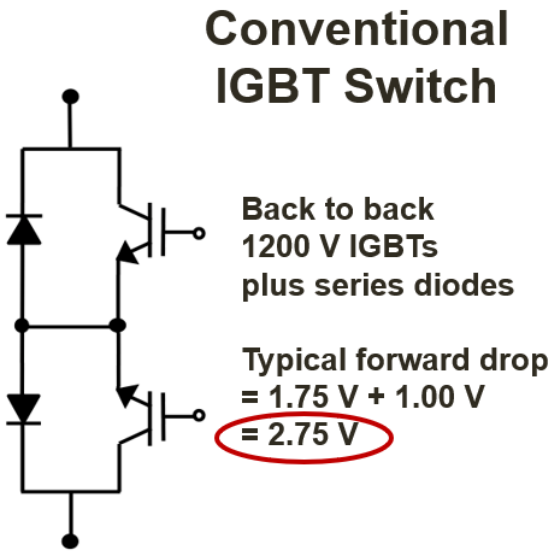
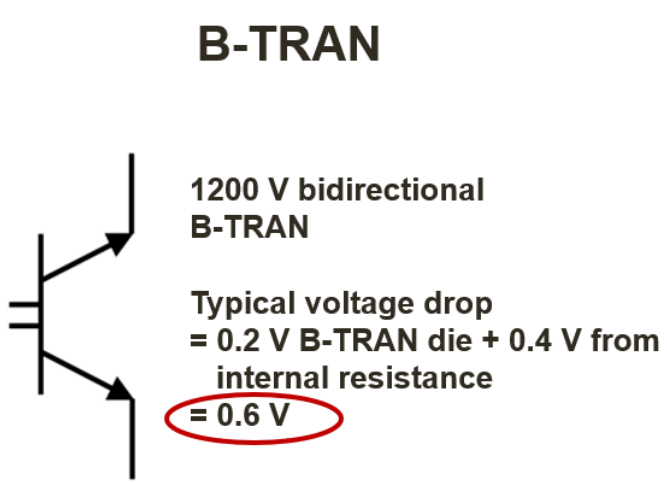
B-TRAN™ Bidirectional Switching

B-TRAN™ replaces 4 conventional devices to provide a bidirectional switch





Effective forward drop <0.6 V

Conduction Losses in Bidirectional Applications >4x better than IGBT + Blocking Diode

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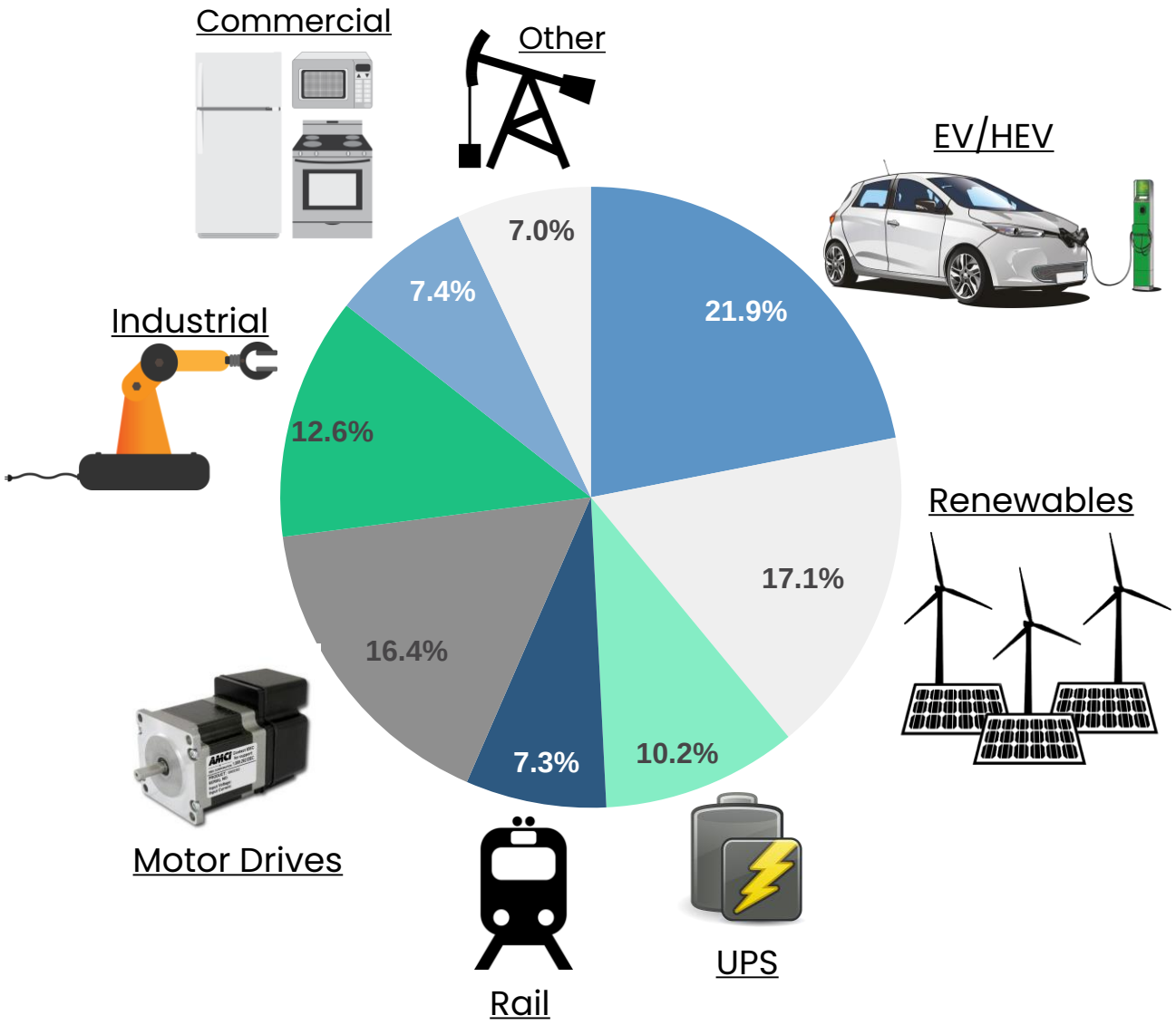
IGBT Market



- IGBT market expected to reach $11B by 2026[1]
- 10.6% projected CAGR[1]
- EV/HEV segment to drive the growth of the IGBT market[1]

[1] *Global Insulated-Gate Bipolar Transistor (IGBT) Market (2021-2026) by Mordor Intelligence*

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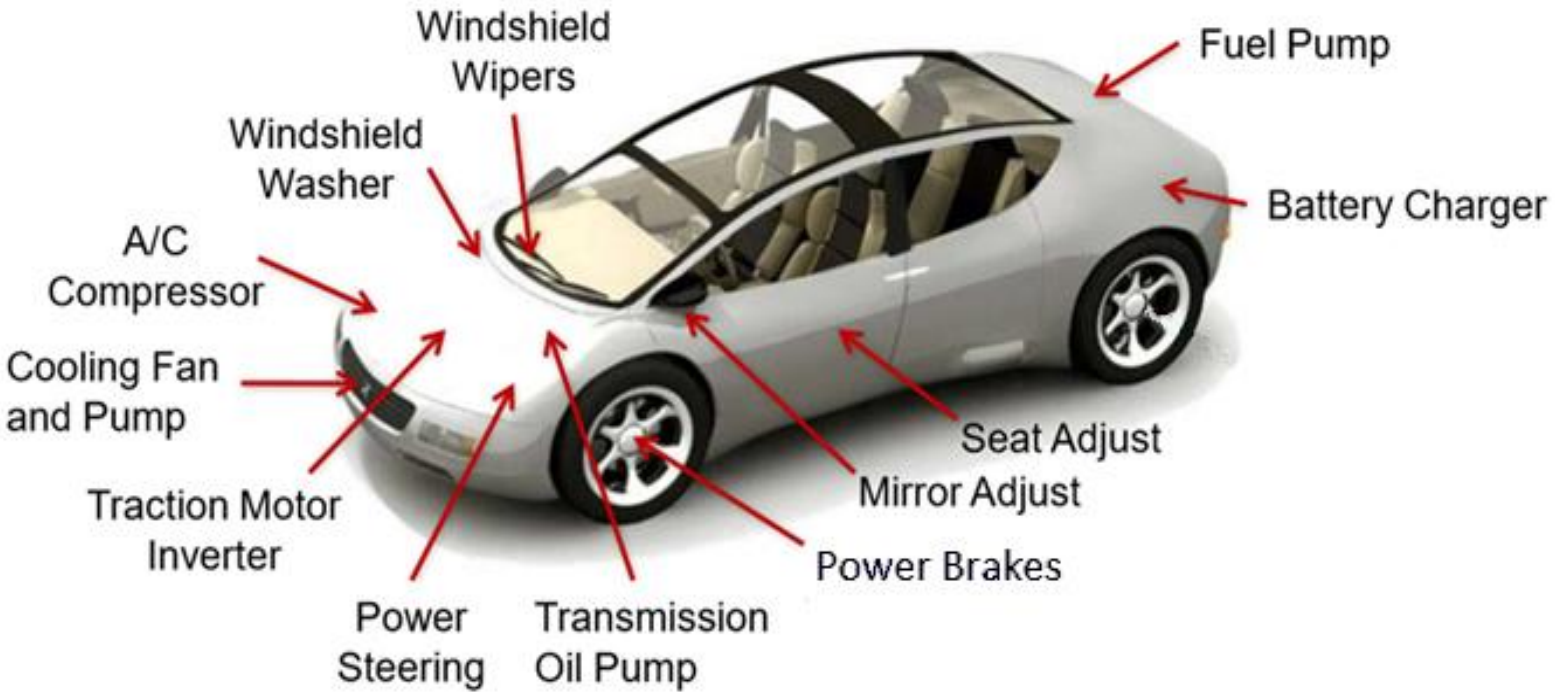
Key Addressable Market Segments

EV/HEV: $1.5B IGBT Market Segment

CAGR: 15%



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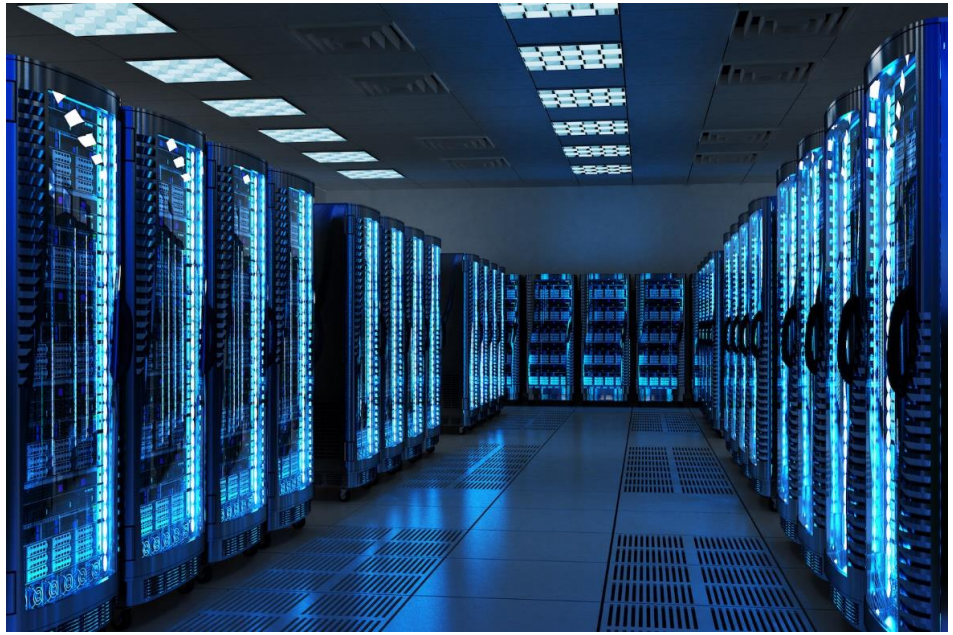
Key Addressable Market Segments Continued

Renewable Energy:
$1.1B IGBT Market Segment

CAGR 12%



Data Center/Cloud Storage:
$0.5B IGBT Market Segment

CAGR 6%

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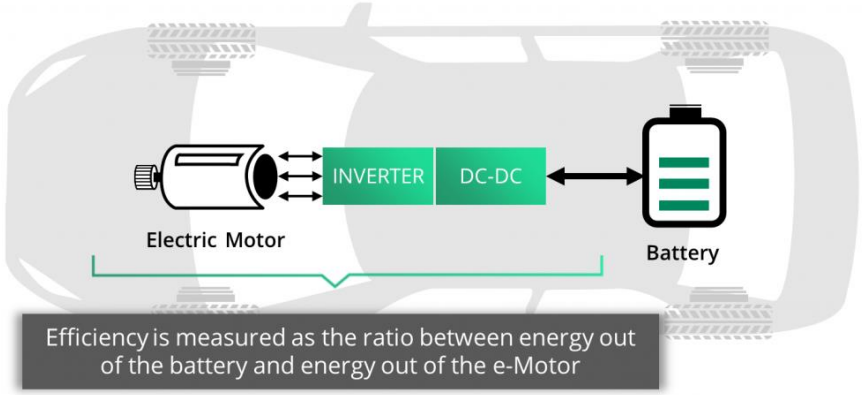
B-TRAN™ Impact in Electric Vehicles



- EVs need to convert DC-AC, AC-DC, and DC-DC efficiently to improve range and performance
- Power switches are needed in the Traction Inverter, DC-DC Converter, On-Board Charger (OBC) and Circuit Protection
- The largest cost component of the drivetrain is the power semiconductor switches which make up 8-10% of the total electric vehicle production cost[1]
- B-TRAN™ reduces the number of power devices needed in bidirectional circuits from 4 to 1 while increasing EV efficiency and range by an estimated 7 to 10%[2]

B-TRAN enables new architectures and solutions to improve EV efficiency, range and performance, while lowering total system size, cost and component count

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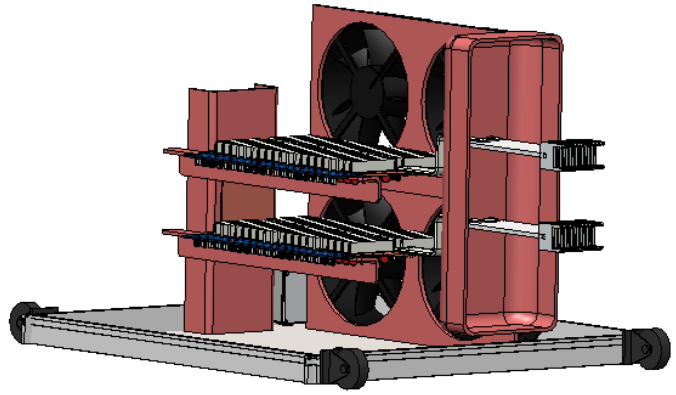
[1] *IGBTs Critical to EV Cost by David Manners*
[2] *Company estimate extrapolated from A Novel Carrier Accumulating Structure for 1220V IGBTs without Negative Capacitance and Decreasing Breakdown-Voltage by Toyota Motor Corporation*

B-TRAN™ Enabled Circuit Breakers

- Solid-state circuit breakers (SSCBs) enabled by B-TRAN™s low conduction losses
- U.S. Navy/NAVSEA funded project ($1.2M to Ideal Power) for direct current SSCB
- Funded under DOD's Rapid Innovation Fund
- Mission critical technology for ship electrification program
- Partnered with Diversified Technologies (DTI)
- Fabricated, packaged and tested initial devices
- Packaged device performance matched computer simulations
  - Very low loss, high breakdown voltage, fast switching speed
- Initial devices delivered to DTI with additional devices in production



B-TRAN™ based MVDC solid-state circuit breaker rated at 12 kV, 500 A (6 MW)

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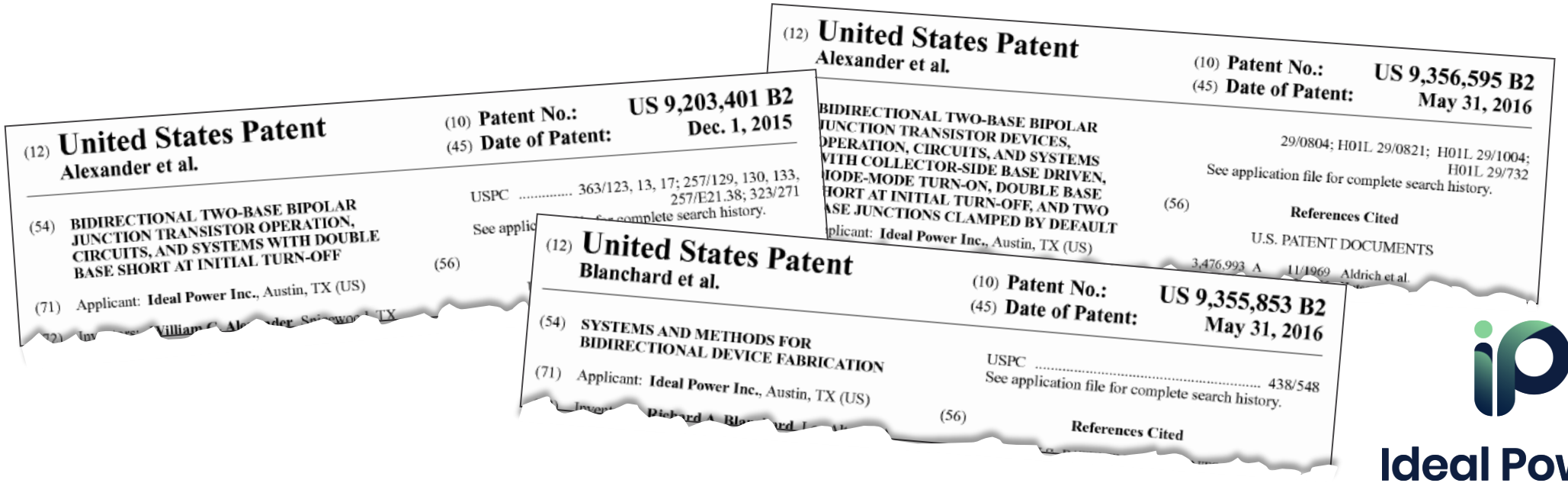
Ideal Power's IP

Region	Issued Patents	Pending Patents
United States	39	6
Foreign	30	17
TOTAL	**69**	**23**

The Patents Cover

- B-TRAN™ device architecture
- Control methodologies and techniques
- Double-sided device manufacturing techniques
- Applications specific uses of B-TRAN™



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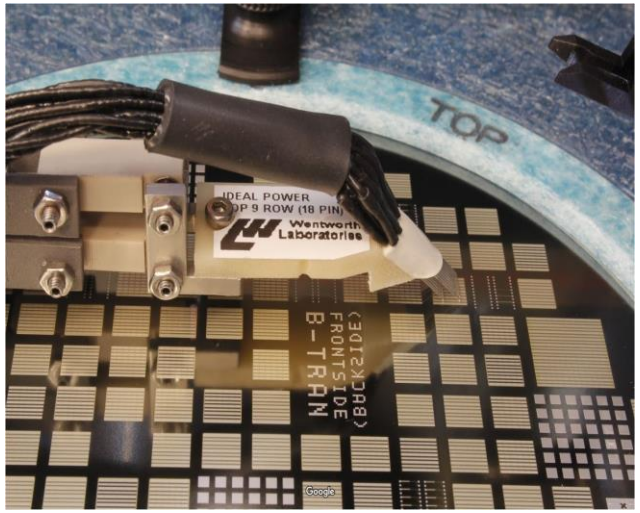
Where We Are Now

- B-TRAN™ produced using standard silicon processing equipment
- Driver and packaging designs completed; driver currently being fabricated
- Completed multiple major milestones under the NAVSEA project including delivery of initial packaged and tested B-TRAN™ devices
- Fabricated device performance consistent with simulations
- Design of multi-die module for commercial sale in process
- Announced collaborations for the testing and evaluation of B-TRAN™ including:
  - Top 10 global automaker
  - Top 10 global solar power conversion provider
  - Forbes Global 500 diverse power management market leader
  - Leading commercial EV manufacturer
  - EV charging company



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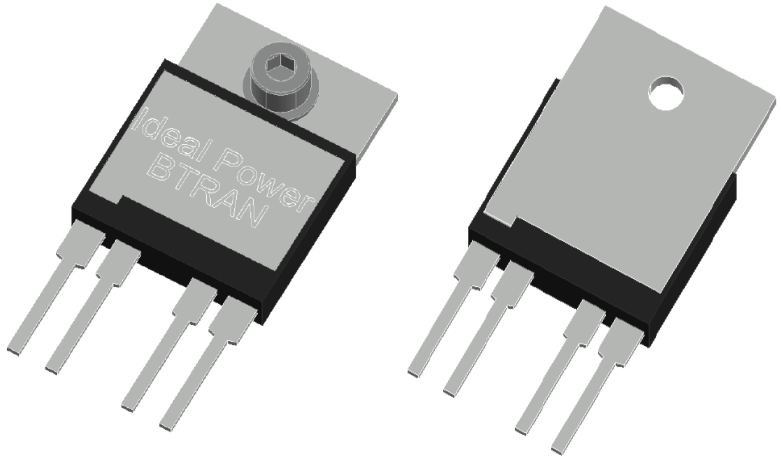
What's Ahead

- Sign additional evaluation agreements for target markets
- Deliver packaged B-TRAN™s with a driver for test and evaluation program
- Complete third-party B-TRAN™ testing
- Complete design and introduce first commercial product
- Qualify a world-class non-domestic fabrication partner for higher volume production
- NAVSEA program – Complete deliveries of packaged B-TRAN™s to DTI followed by demonstration of a B-TRAN™ enabled 12kV DC SSCB
- Submit additional proposals for government funding



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Recent News and Capital Structure

News Releases

August 10, 2022

Ideal Power Delivers Initial B-TRAN™ Devices to Diversified Technologies under NAVSEA Program

March 14, 2022

Ideal Power Appoints Two Independent Members to its Board of Directors

March 1, 2022

Ideal Power Adds Leading Commercial Electric Vehicle Manufacturer to its B-TRAN™ Test and Evaluation Program

October 27, 2021

Ideal Power Adds Global Diverse Power Management Market Leader to its B-TRAN™ Test and Evaluation Program

August 3, 2021

Ideal Power Signs B-TRAN™ Test and Evaluation Agreement with Top 10 Global Provider of Power Conversion Solutions to the Solar Industry

July 27, 2021

Ideal Power Signs B-TRAN™ Sampling Agreement for Electric Vehicle Charging Application

July 20, 2021

Ideal Power to Sample B-TRAN™ Bidirectional Power Switches with Top 10 Global Automaker

IPWR

Nasdaq Listed

Shares Outstanding[1]:	**5,903,797**
Options/Warrants[1]:	**1,654,196**
Cash Balance[1]:	**$20.0 Million**
Debt Balance[1]:	**$0.0 Million**
Sector:	**Industrials**
Year-End:	**December 31**

1) As of June 30, 2022

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Thank you.

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