



Intelligent Technology. Better Future.

August 2022

Safe Harbor Statement & Forecast Information

This document includes “forward-looking statements,” as that term is defined in Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. All statements, other than statements of historical facts, included or incorporated in this document could be deemed forward-looking statements, particularly statements about the future financial performance of onsemi, including financial guidance for the year ending December 31, 2022. Forward-looking statements are often characterized by the use of words such as “believes,” “estimates,” “expects,” “projects,” “may,” “will,” “intends,” “plans” or “anticipates” or by discussions of strategy, plans or intentions. All forward-looking statements in this document are made based on our current expectations, forecasts, estimates and assumptions and involve risks, uncertainties and other factors that could cause results or events to differ materially from those expressed in the forward-looking statements. Certain factors that could affect our future results or events are described under Part I, Item 1A “Risk Factors” in the 2021 Annual Report on Form 10-K filed with the Securities and Exchange Commission (“SEC”) on February 14, 2022 (the “2021 Form 10-K”) and from time to time in our other SEC reports. Readers are cautioned not to place undue reliance on forward-looking statements. We assume no obligation to update such information, except as may be required by law. You should carefully consider the trends, risks and uncertainties described in this document, our 2021 Form 10-K and subsequent reports filed with or furnished to the SEC before making any investment decision with respect to our securities. If any of these trends, risks or uncertainties actually occurs or continues, our business, financial condition or operating results could be materially adversely affected, the trading prices of our securities could decline, and you could lose all or part of your investment. All forward-looking statements attributable to us or persons acting on our behalf are expressly qualified in their entirety by this cautionary statement.

The Next Big Thing

Hassane El-Khoury
President & CEO

onsemi Inflection Point



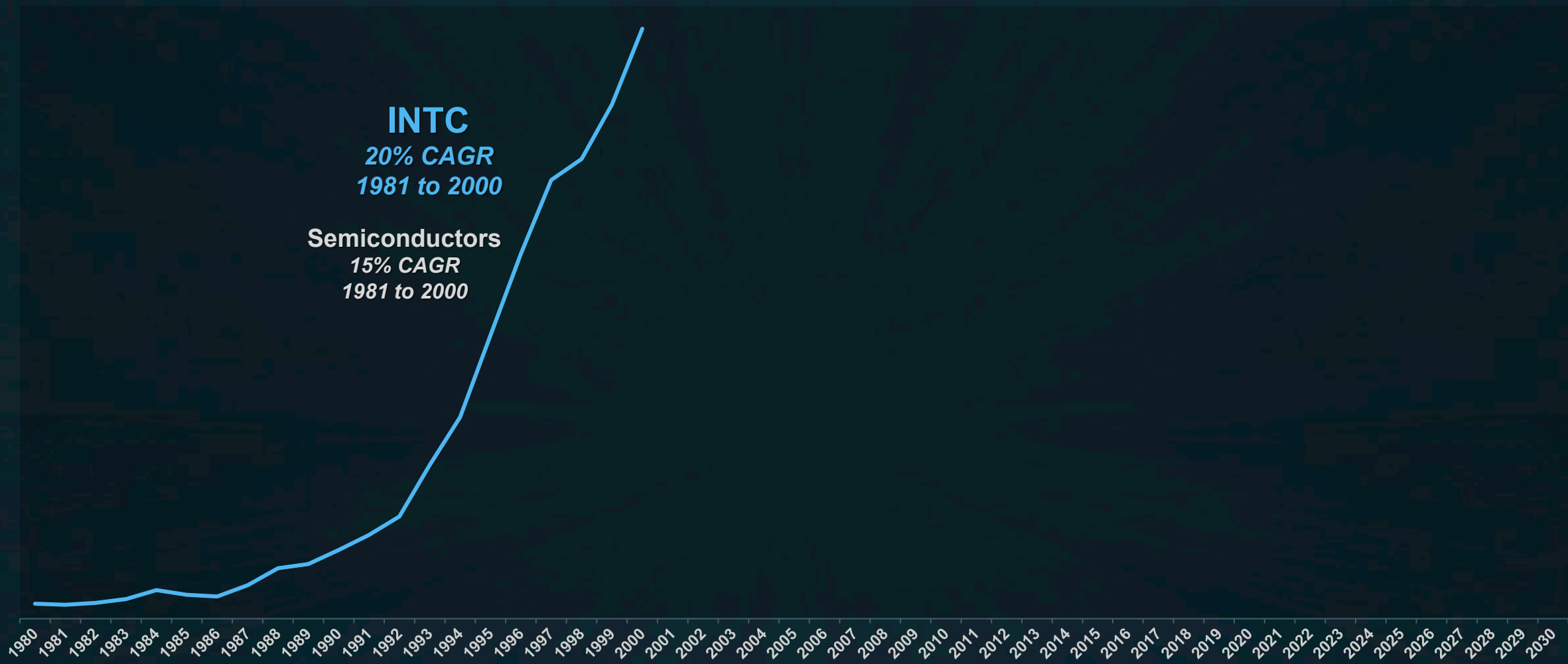
GTAT acquisition
closed October 28
72 Hudson, NH
employees

250+ Hudson
employees & 5X+
output capacity by
the end of 2022

**onsemi now has end-to-end capabilities
with the substrate operation here in Hudson**

Technology inflection points drive semiconductor revenue growth

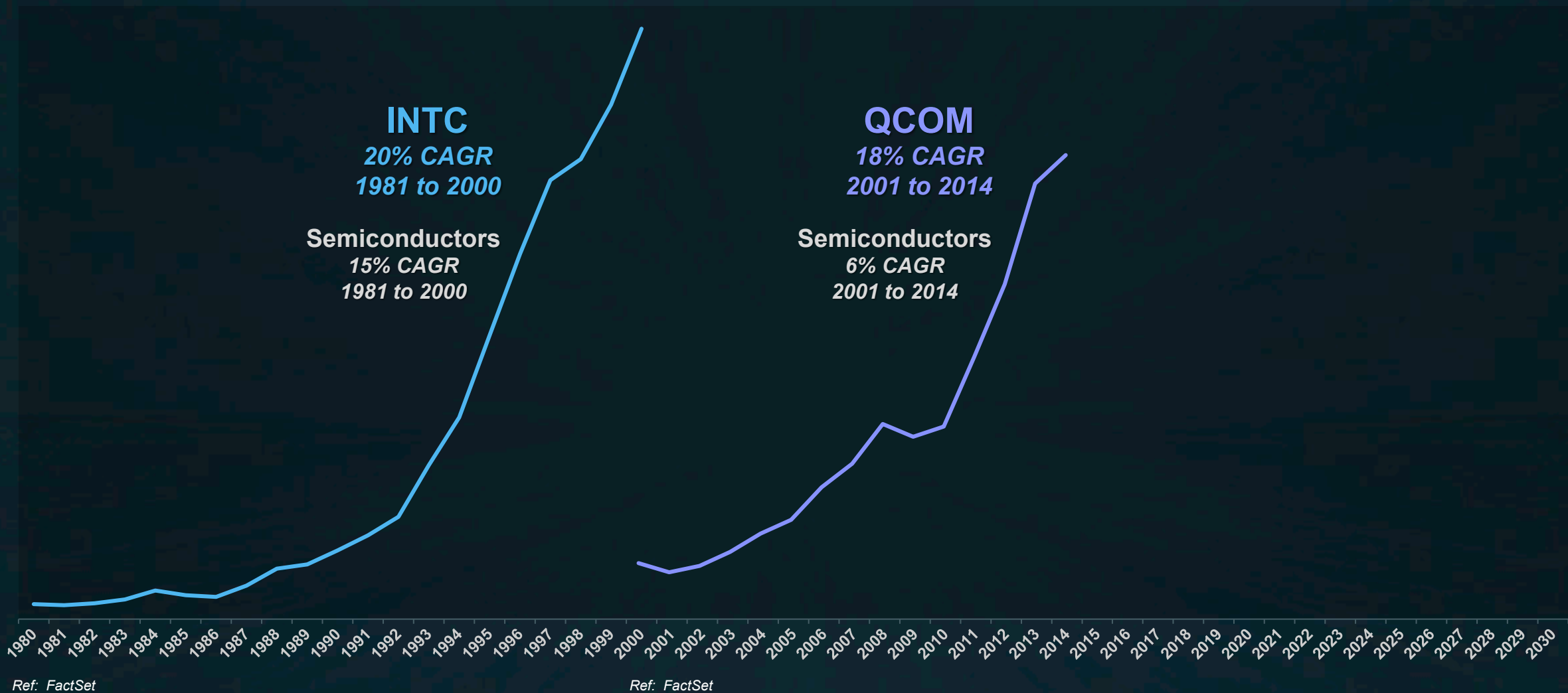
Home PC / Microprocessor market inflection point



Ref: FactSet

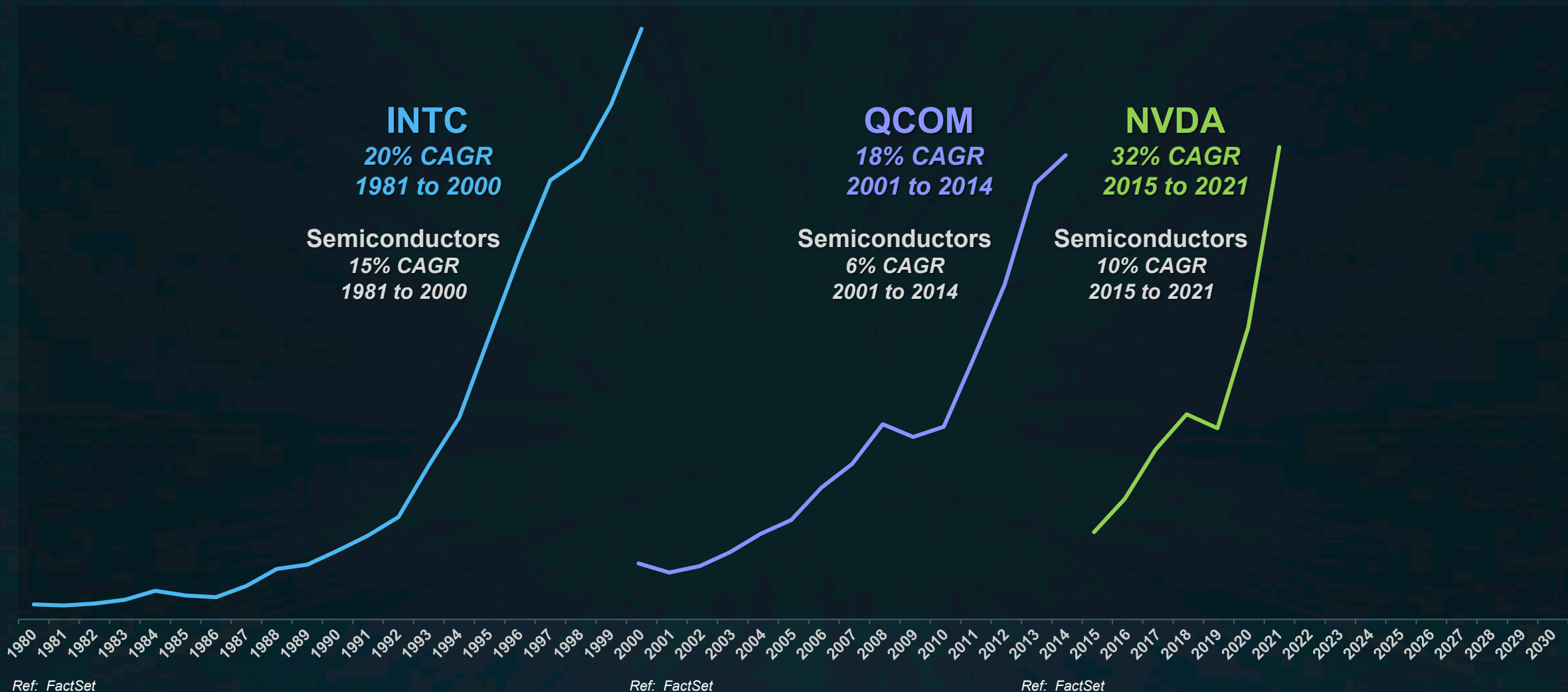
Technology inflection points drive semiconductor revenue growth

3G / Smartphone market inflection point



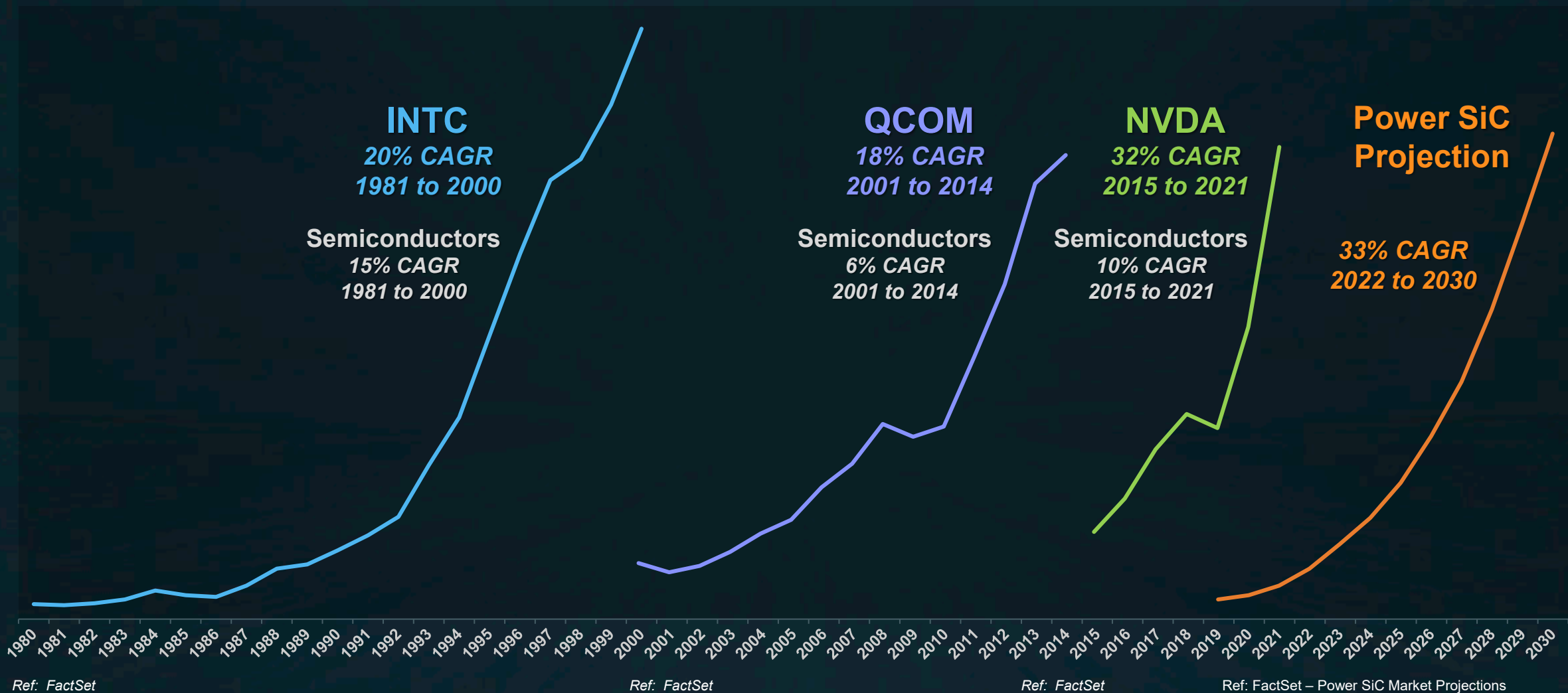
Technology inflection points drive semiconductor revenue growth

GPU Computing market inflection point



Technology inflection points drive semiconductor revenue growth

Power SiC is the next inflection point for semiconductors



onsemi's SiC Leadership

Fueling high-growth megatrends for a sustainable ecosystem



- **SiC end-to-end capabilities** provide unmatched supply assurance
- **Differentiated technology**
 - **SiC technology** – Highest efficiency and longer-range from cell and trench structure
 - **Package technology** – High power density for the most efficient interconnect and direct cooling
- **Leading Portfolio**
 - Broad range of **Power and Sensing solutions**

onsemi is uniquely positioned to win in Silicon Carbide

Value-Driven Performance

Simon Keeton
Executive Vice President & General Manager
Power Solutions Group

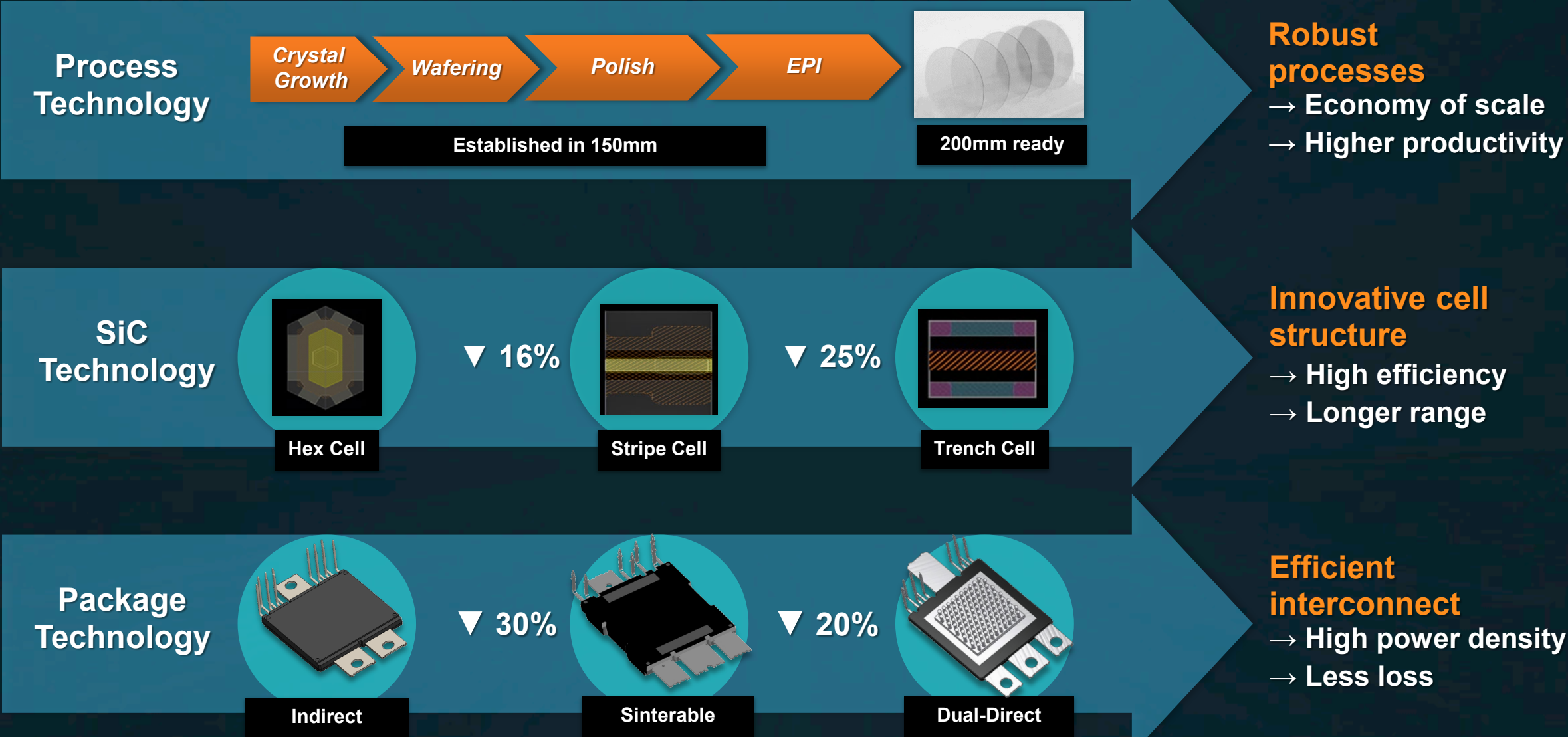
Electrification drives significant TAM expansion

SiC is a must to be relevant in EV



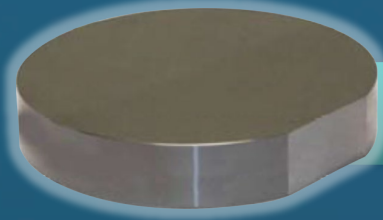
Source: onsemi internal bottoms-up customer TAM buildup

onsemi's Superior SiC Technology Leadership



SiC Supply Assurance: From Substrate to Modules

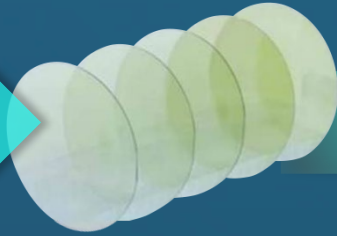
SiC Substrates



- 150/200mm SiC wafering internal

Hudson, NH, USA

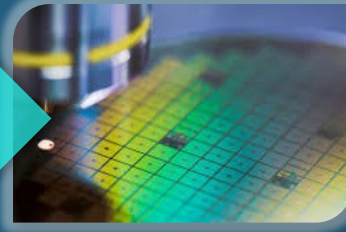
SiC Epi



- 150/200mm SiC epi internal

Bucheon, KR
Roznov, CZ

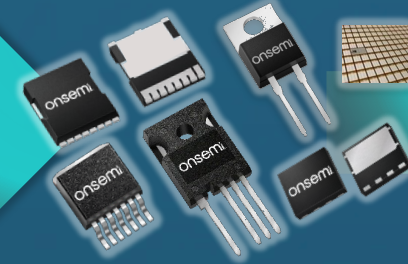
SiC Fab



- Fabs ready today for 150mm→200mm migration

Bucheon, KR

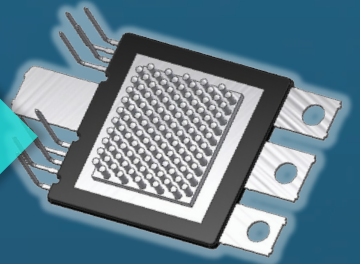
SiC Devices / Die



- Broad base of packages
- Die only & metal options
- Auto & Industrial devices

Binh Duong Province, VN
Suzhou, CN
Shenzhen, CN
Seremban, MY

SiC Modules



- Case and transfer molded options
- Full portfolio of half & full bridge modules
- Single & dual cooling, direct & indirect

onsemi's end-to-end capabilities drive superior performance and quality

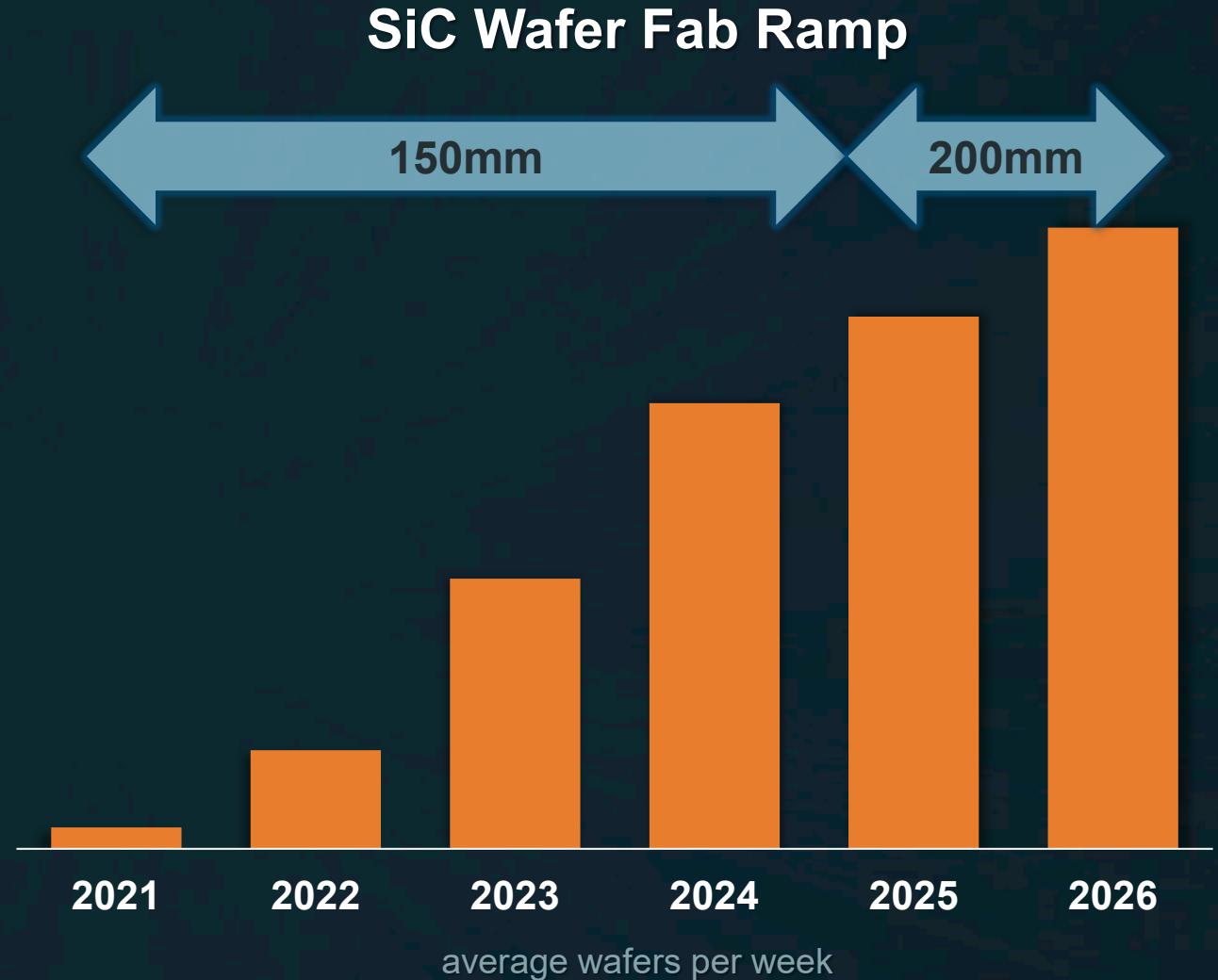
SiC Scale: Capacity Expansion Plan

Leverage Brownfield: Expansion at existing sites

- Hudson – Boule Growth
 - Capacity will expand 5X+ by 2022
- Bucheon, KR – Device Fab, EPI
 - Capacity will expand 3X+ by 2023
 - Capacity will nearly double again 2024
 - Capable of another 2X expansion
- Roznov, CZ – Wafering and EPI
- TBD, USA?

200mm SiC Plan

- ✓ 200mm SiC boule capability
- ✓ 200mm SiC device fab capability
- ✓ All equipment is 200mm capable
 - Wafer qualification in 2024
 - 200mm revenue ramp in 2025



In-cabin Solutions

- Driver Monitoring Systems (DMS)
- Occupancy Monitoring Systems (OMS)
- Supplementary Restraint System
- Gesture Control

Viewing Solutions

- Rearview Cameras (RVC)
- Surround View Systems (SVS)
- Camera Monitoring Systems (CMS, e-mirror)

Vehicle Electrification xEV

HEV / PHEV / BEV

- On-Board Charger
- Traction Inverter
- EV Auxiliary
- HV-LV DC-DC Converter
- Electronic Throttle Control

48 V Boardnet

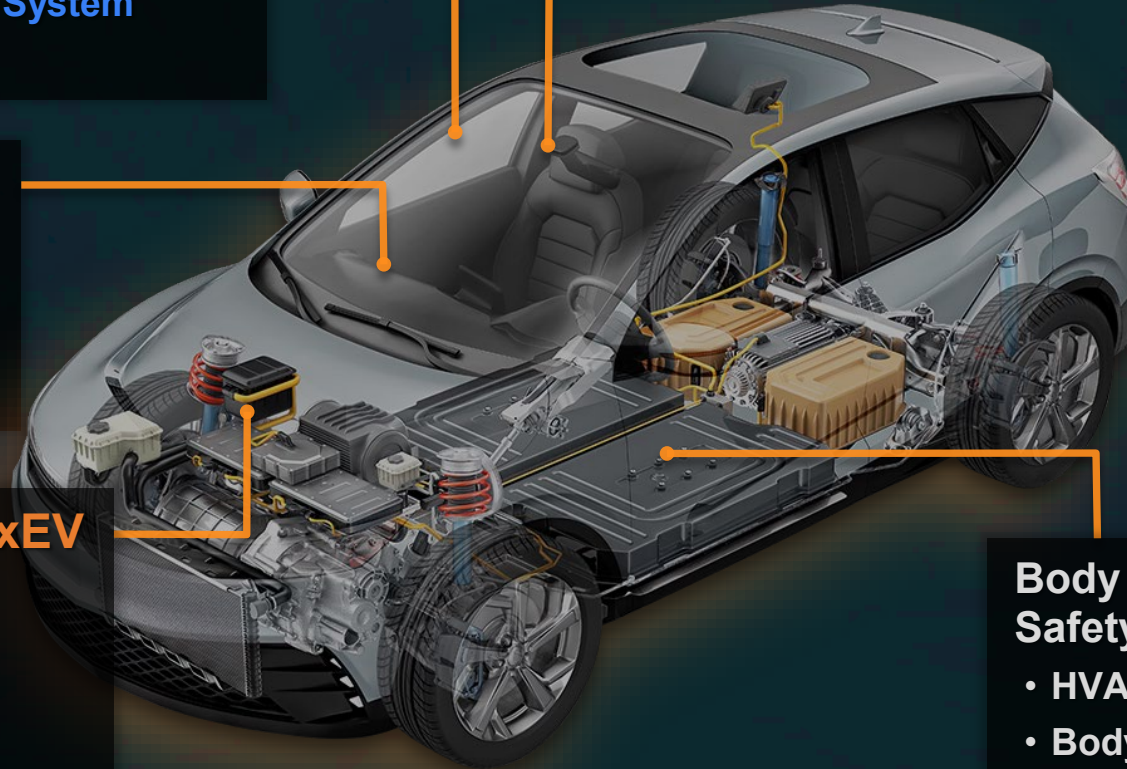
- 48 V Starter Generator
- 48 V-LV DC-DC Converter

ADAS and Autonomous Driving Solutions

- Front Sensing Systems
- Surround Sensing Systems
- Autonomous Parking Assist
- Highway Cruise Pilot
- Near and far field LIDARs
- Ultrasonic
- PMIC

Body Electronics & LED Lighting, Safety and Security

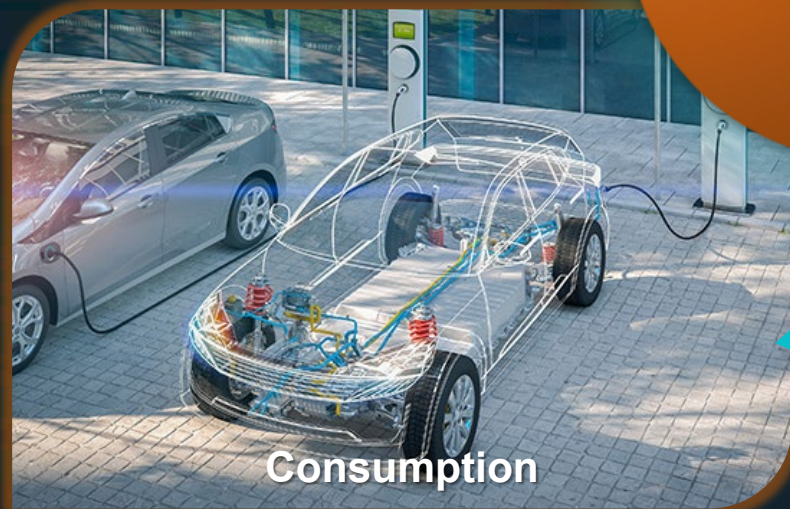
- HVAC
- Body/ Zonal Control Module
- Electric Power Steering
- Braking
- Advanced Lighting Systems
- Tire pressure monitor: TPMS / TMS
- In Vehicle Networking



onsemi
Automotive
Solutions



Generation



Consumption

onsemi
solutions for
Electric Mobility



Storage

Value-Driven Performance

Energy Infrastructure



Factory Automation



5G & Cloud Power



Electric Vehicles



Advanced Safety

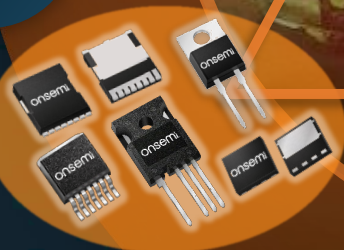
Substrates

Vehicle Electrification

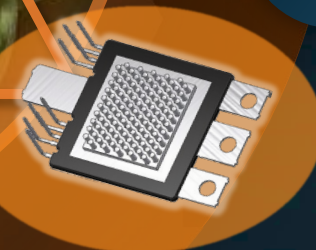
SiC



Charging



Devices

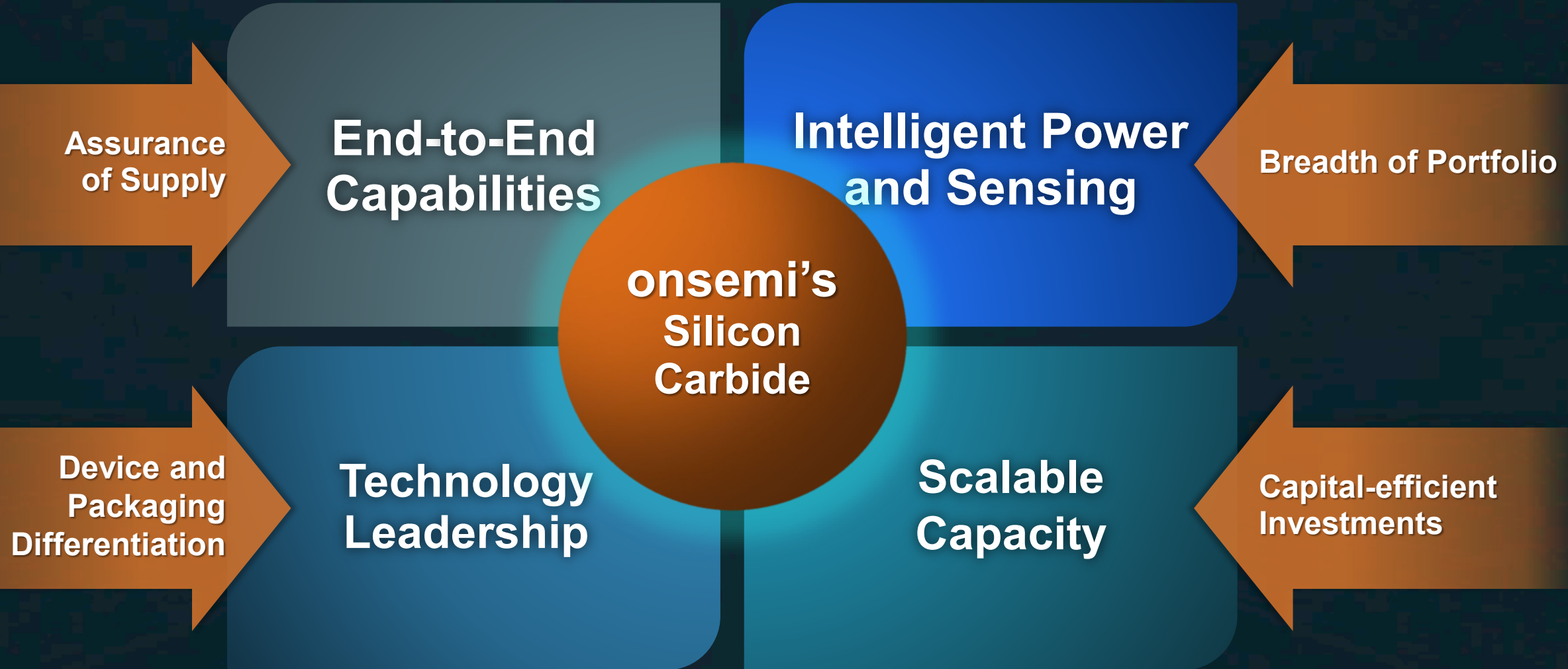


Modules

Seizing the Silicon Carbide Opportunity

Thad Trent
Executive Vice President
& CFO

onsemi's Winning Combination



We've had a busy year...



GTAT Acquisition

OCTOBER 2021

- Assurance of supply
- End-to-end capabilities for lower cost structure
- Scalability
- 150mm → 200mm

So far...

- 72 → 175+ employees
- Expansion into second building
- 5X+ output by end of 2022

We've had a busy year...



HUDSON
New Hampshire

Brownfield Capacity
Expansion

Boule Growth



ROZNOV
Czech Republic

Brownfield Capacity
Expansion

Wafer, EPI



BUCHEON
Korea

Brownfield Capacity
Expansion

Device Fab, EPI

We've had a busy year...

Customer Engagements

Vehicle Electrification

Automotive OEMs now directly engaged

Auto & EV Disruptors LTSAs across the globe

Energy Infrastructure

7 of 10 energy infrastructure market leaders

Committed revenue through LTSAs

Customers co-investing in Capacity Expansion

...Here's what we have to show for it

SiC for Automotive and Industrial

Secured **\$4B** in
committed revenue¹

Projecting **3x** revenue
growth in 2022

Plan to exceed **\$1B**
in 2023

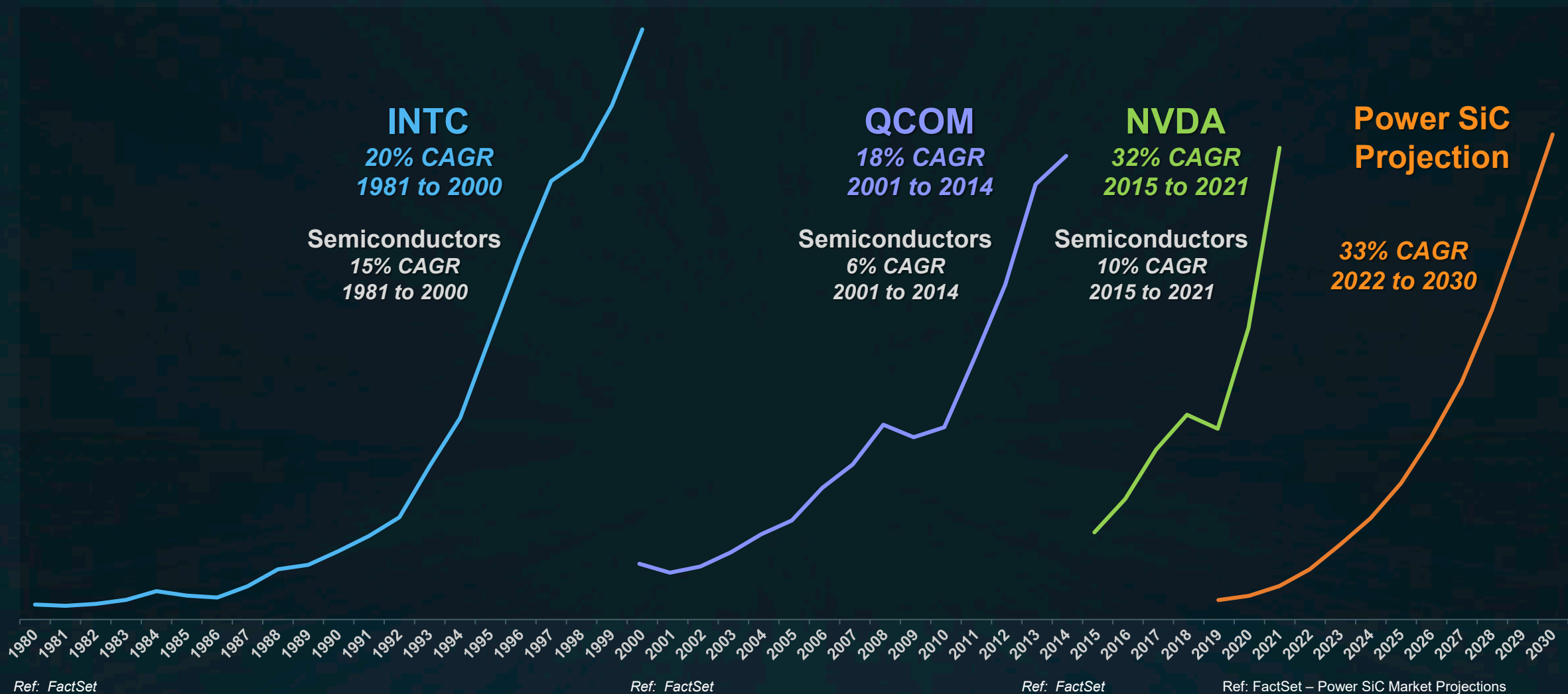


onsemi is winning with market leaders and disruptors

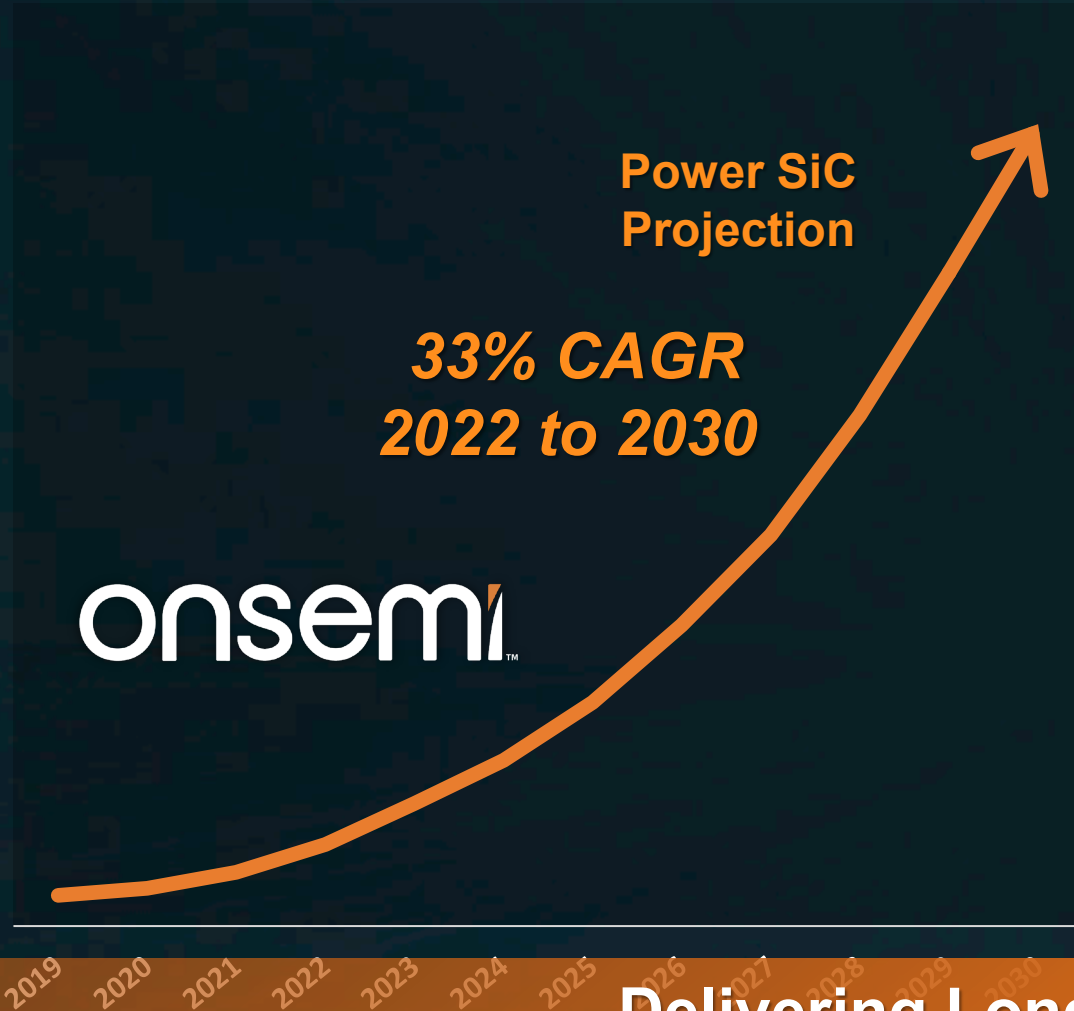
¹LTSA's for SiC from 2023 to 2025

Technology inflection points drive semiconductor revenue growth

Power SiC is the next inflection point for semiconductors



onsemi: the SiC Market Leader



High-growth megatrends of EV, Charging and Energy Infrastructure driving \$6.5B TAM expansion

Financial model allows for scalable, capital-efficient investments and operating leverage

Capturing value through industry-leading performance and differentiated solutions

Delivering Long Term Value Creation

Ref: FactSet – Power SiC Market Projections



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