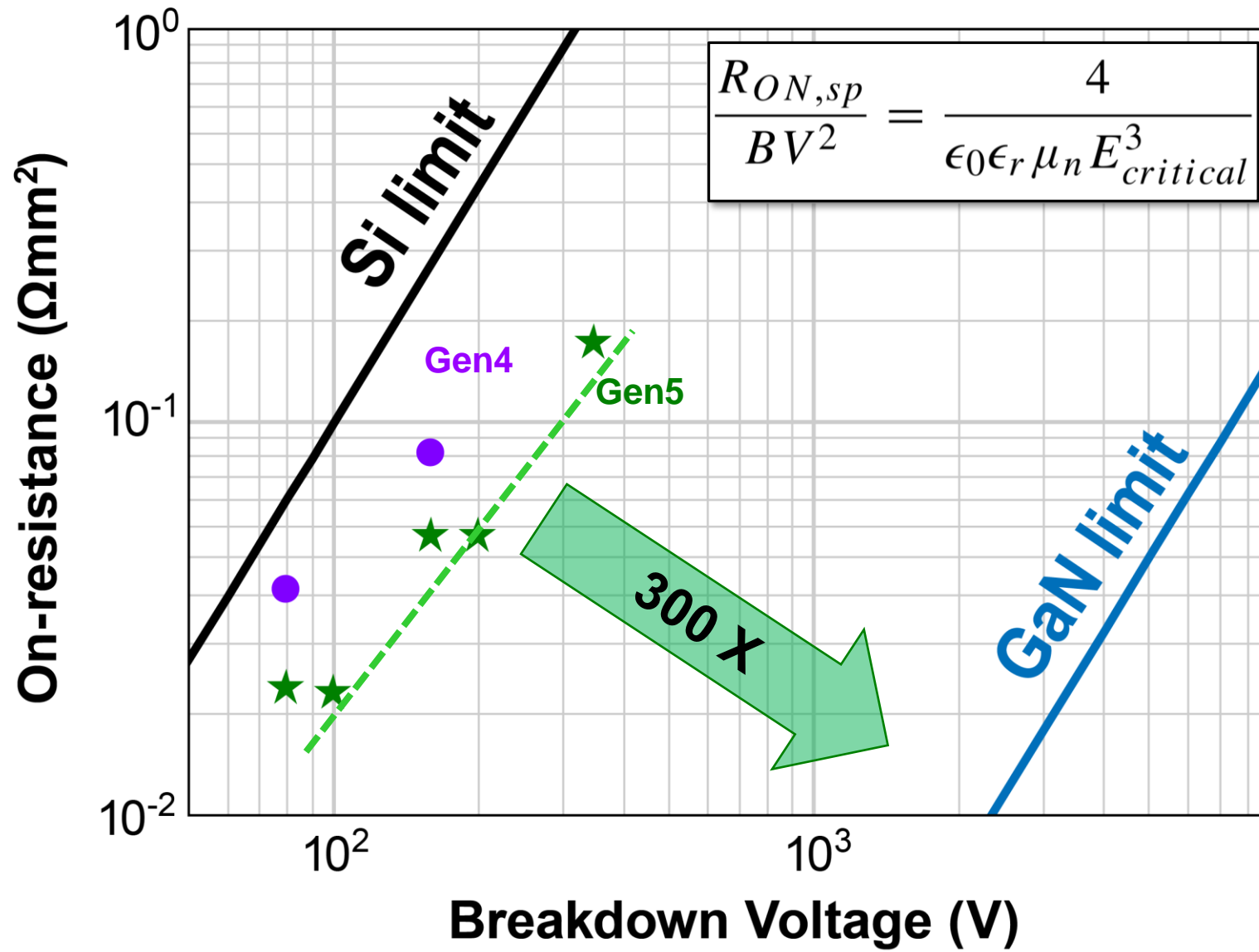


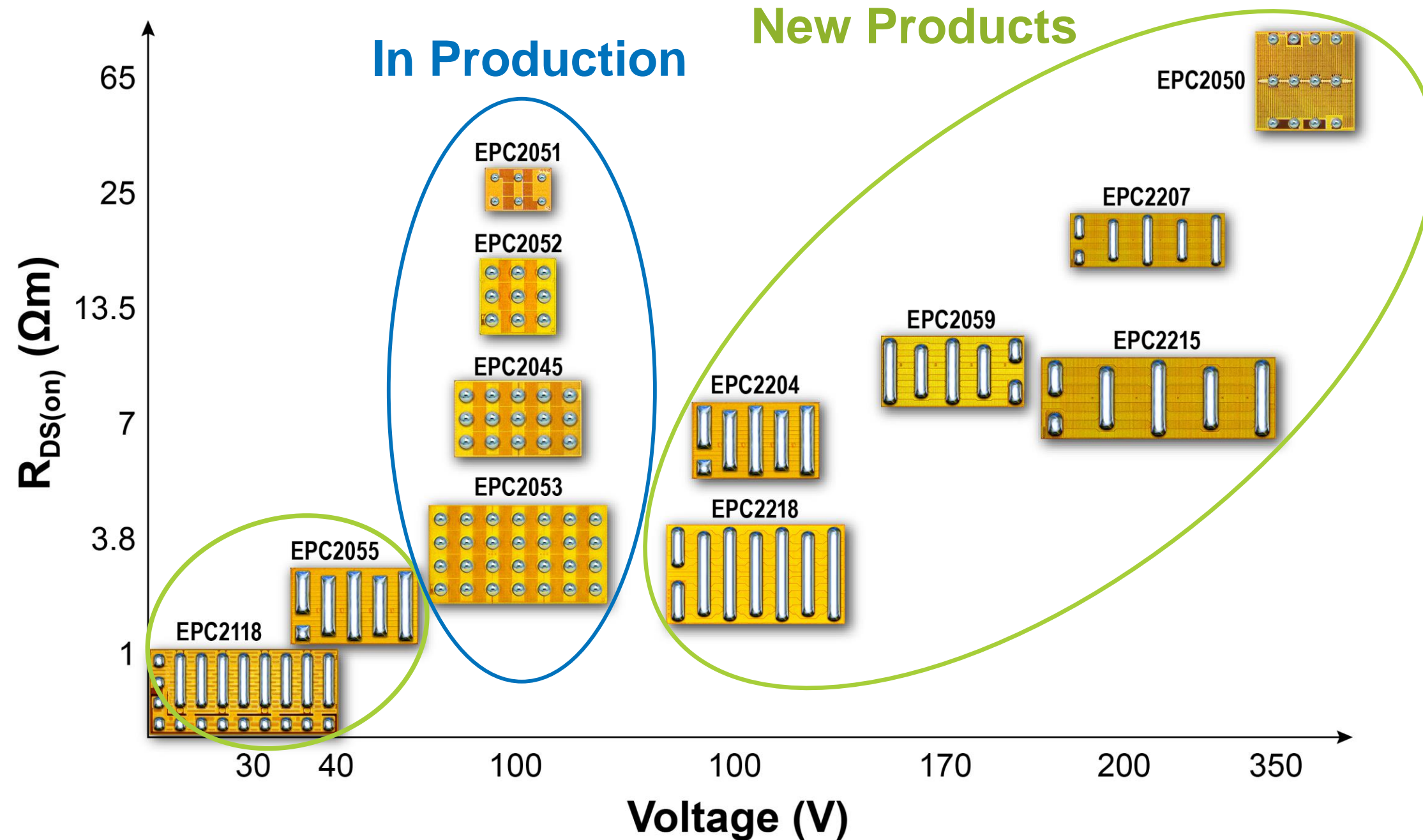
# The Path Forward for GaN Power

**Alex Lidow**

# eGaN Technology Evolution



# Gen5 Product Portfolio

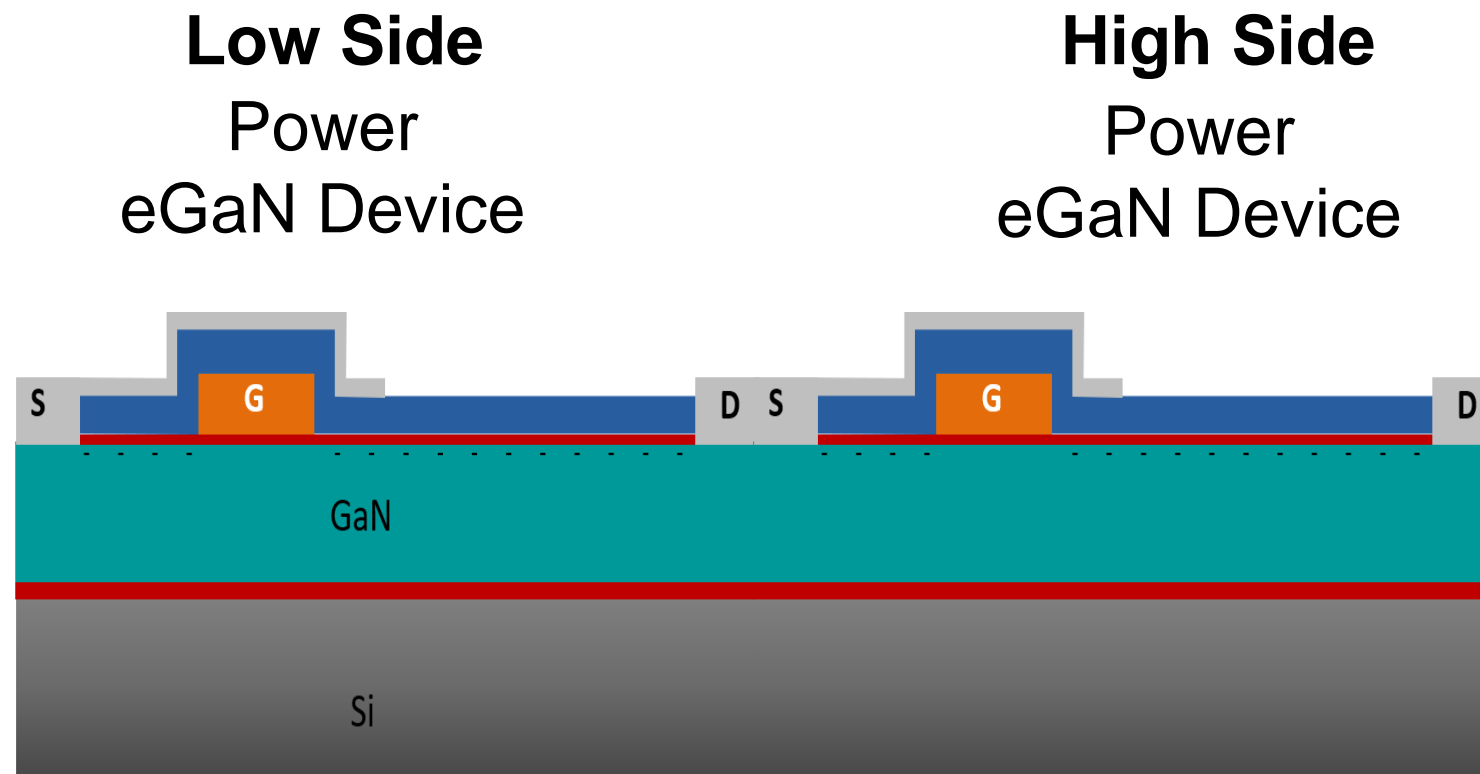


# Integrated Circuits

# Phase 1: GaN Integration

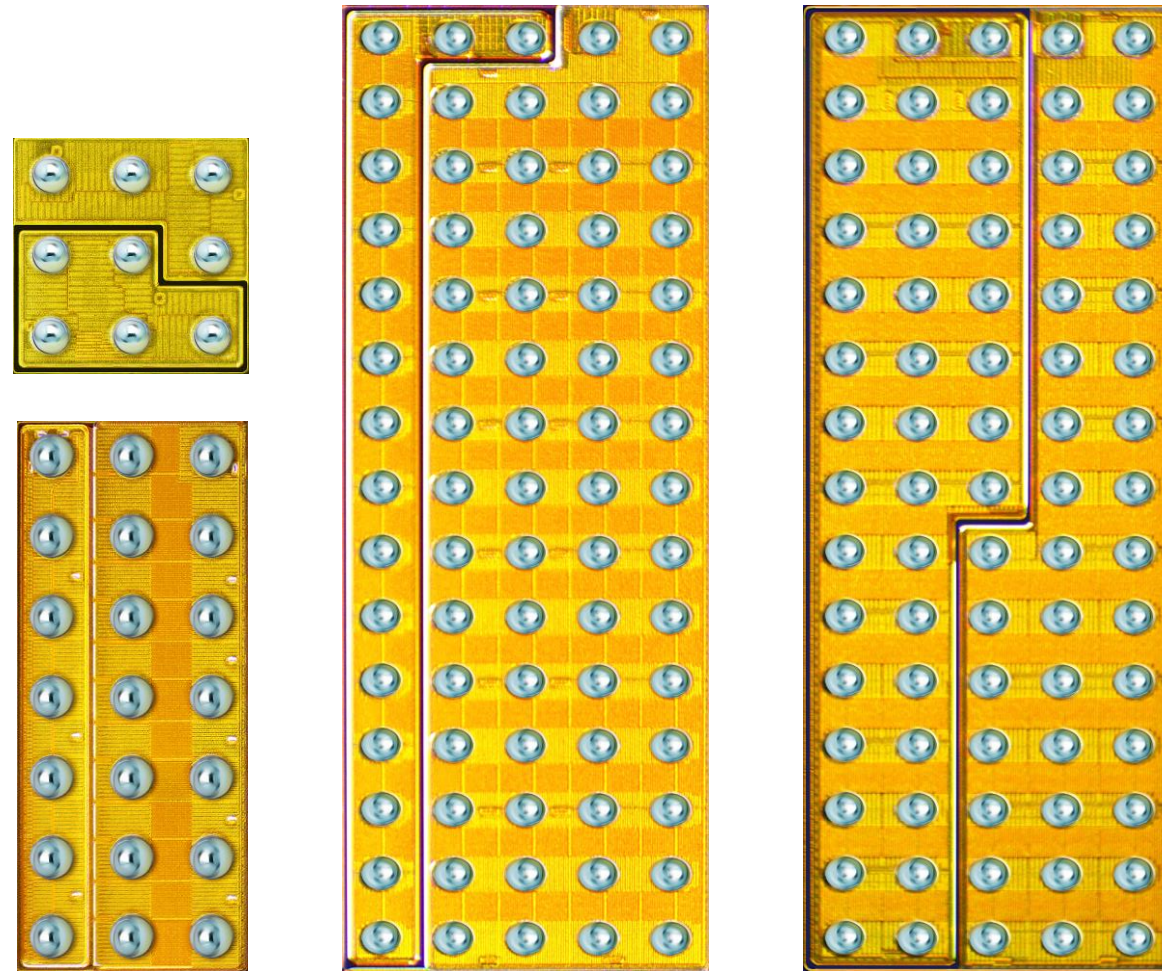
Being a lateral device, multiple GaN FETs exist side-by-side with **independent** voltage ratings.

## Integrated Half-Bridge



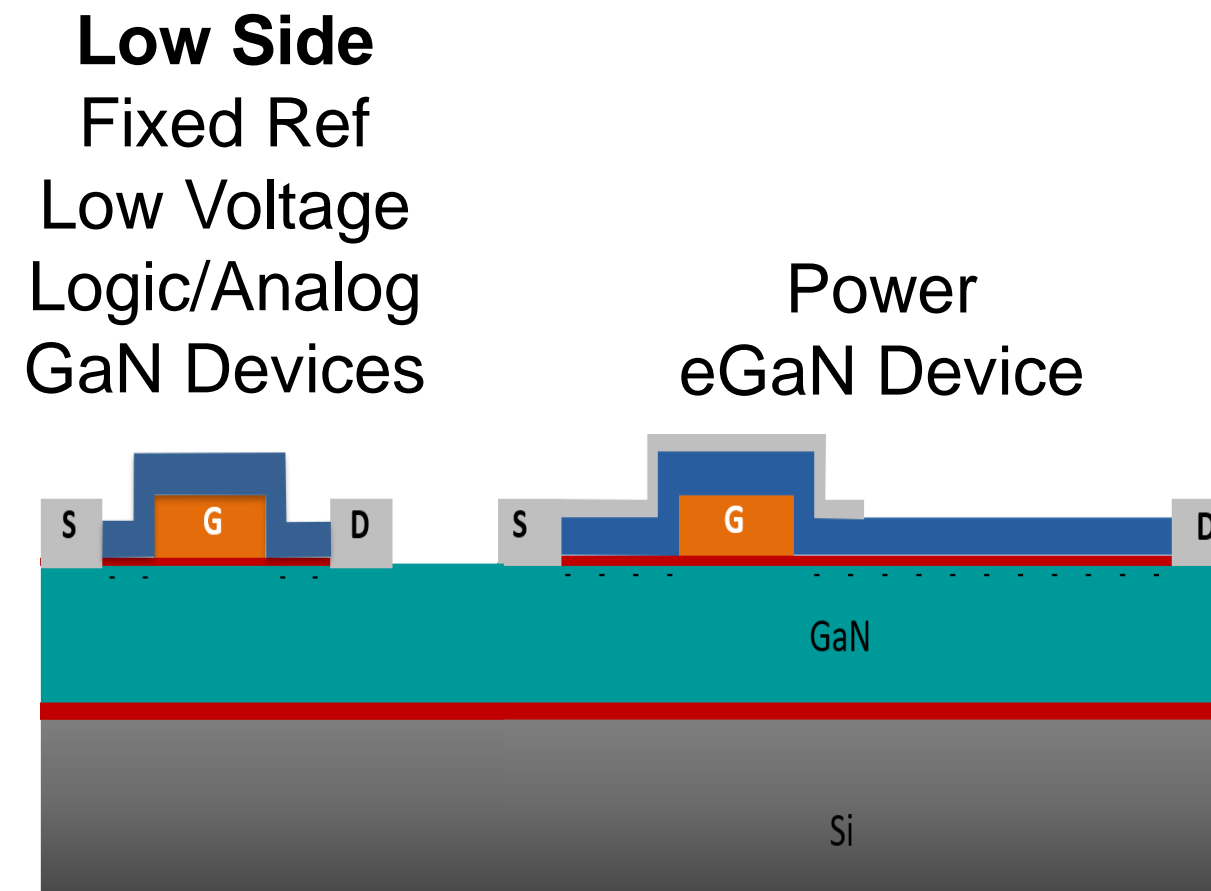
# Phase 1: Monolithic Half Bridges

**30 V – 100 V Symmetric and Asymmetric**



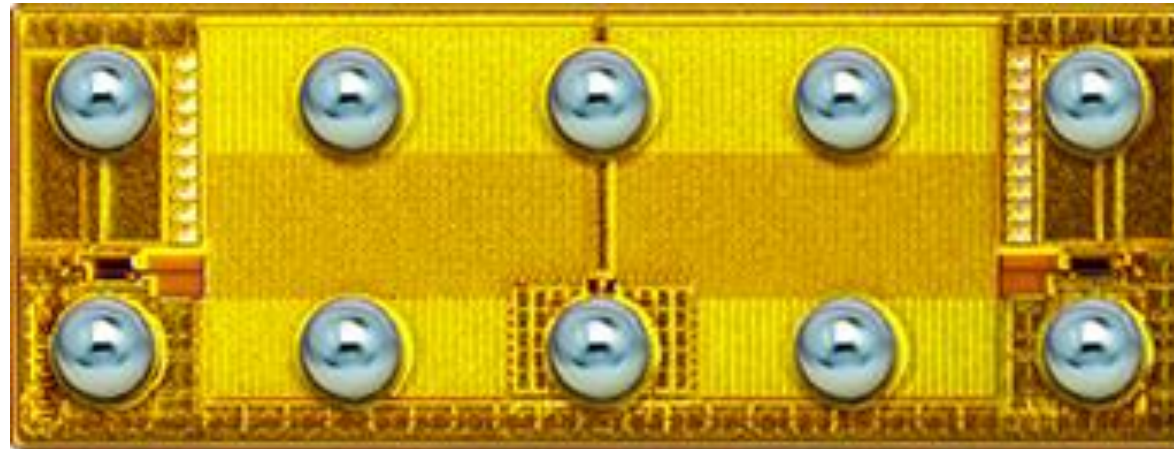
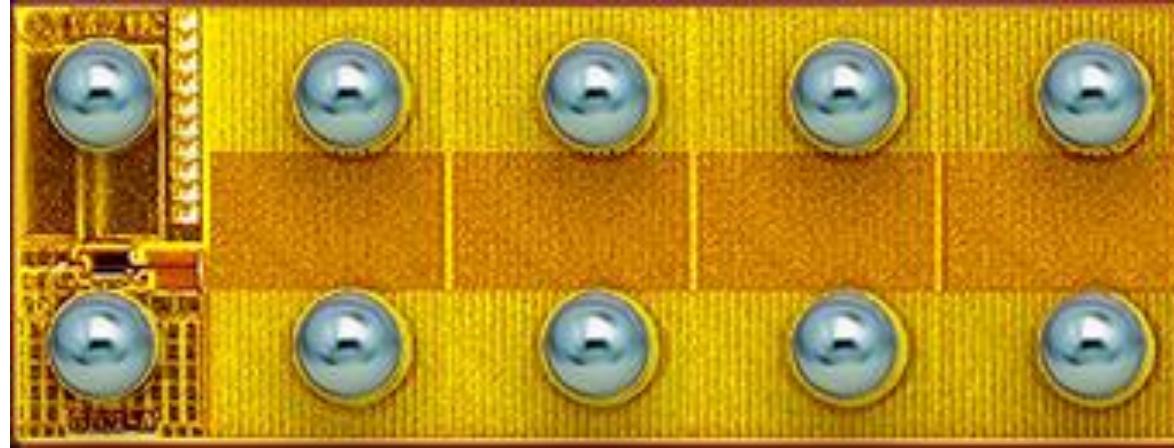
# Phase 2: GaN Integration

Being a lateral device, multiple GaN FETs exist side-by-side with **independent** voltage ratings.





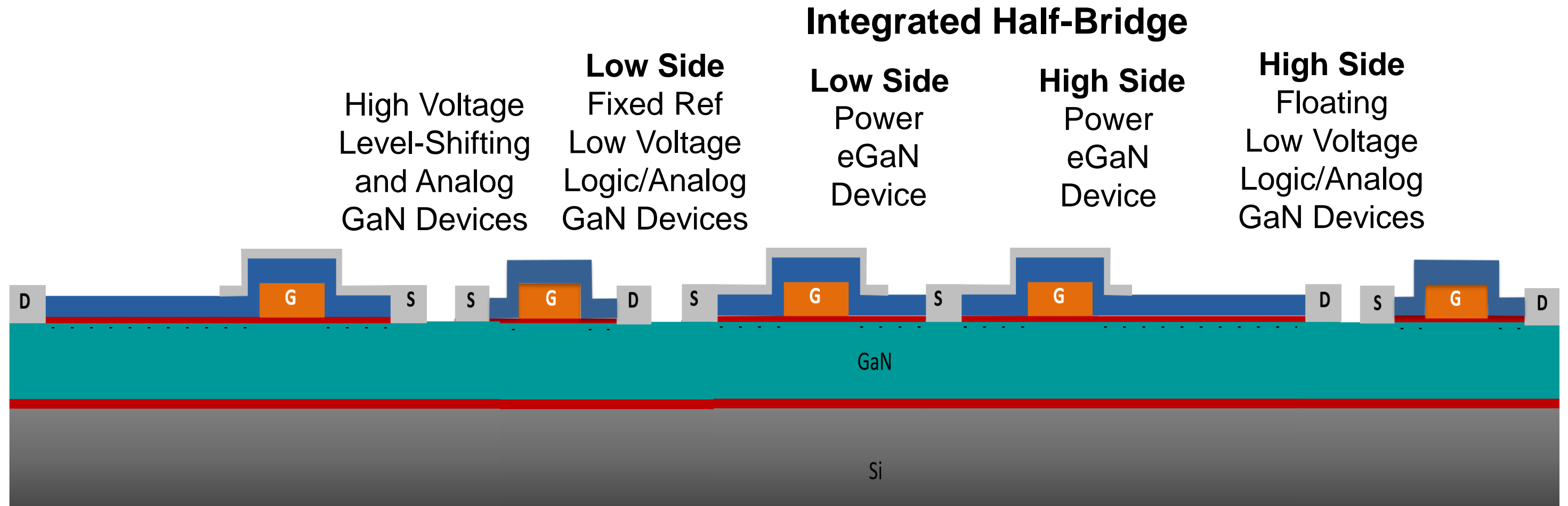
# Phase 2: eGaN<sup>®</sup> FET Plus Driver



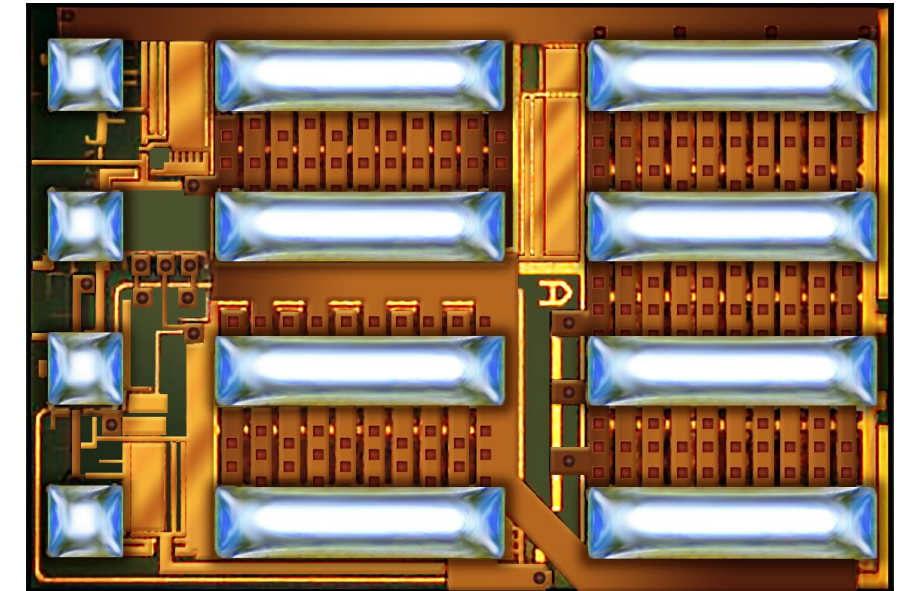
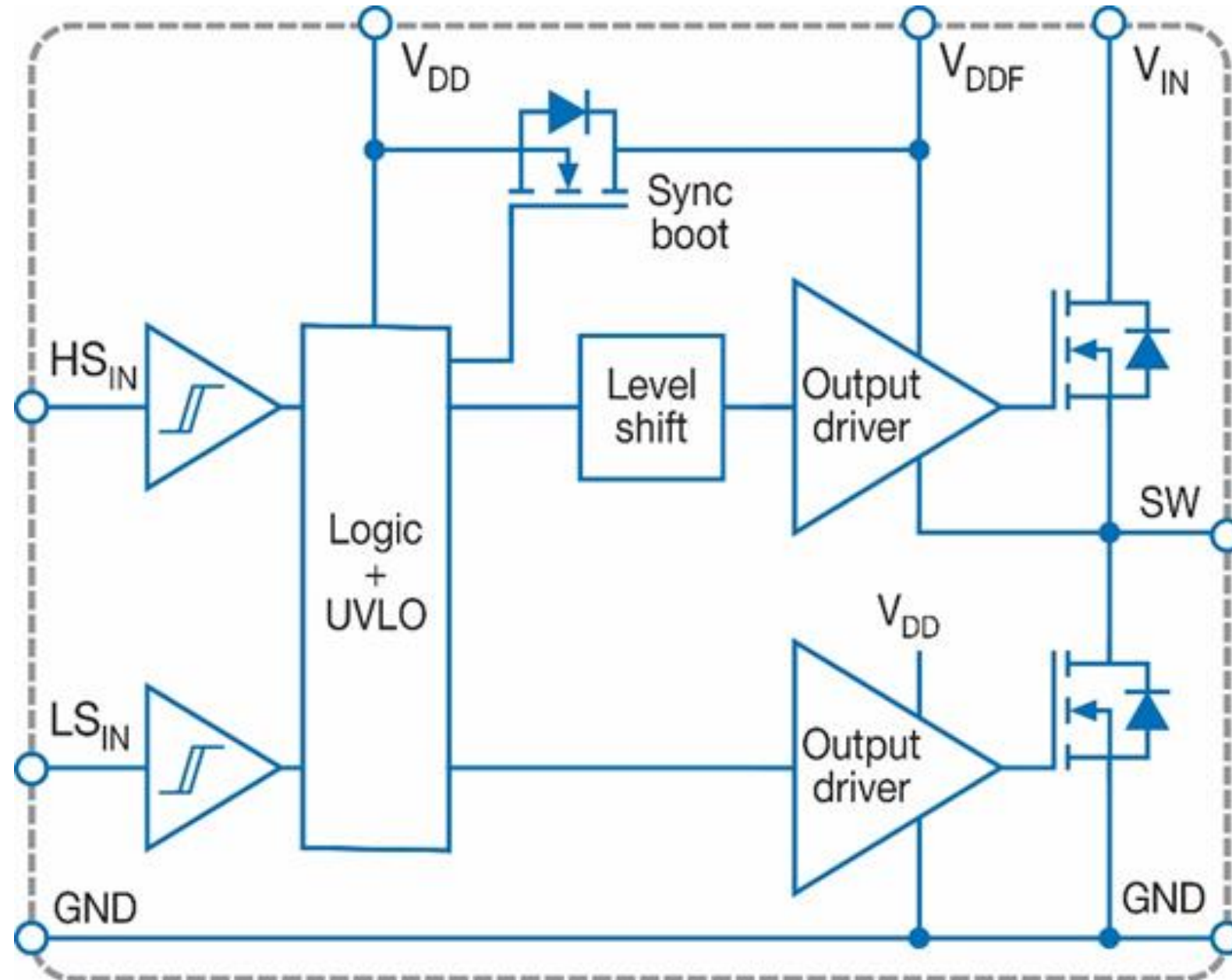


# Phase 3: GaN Integration

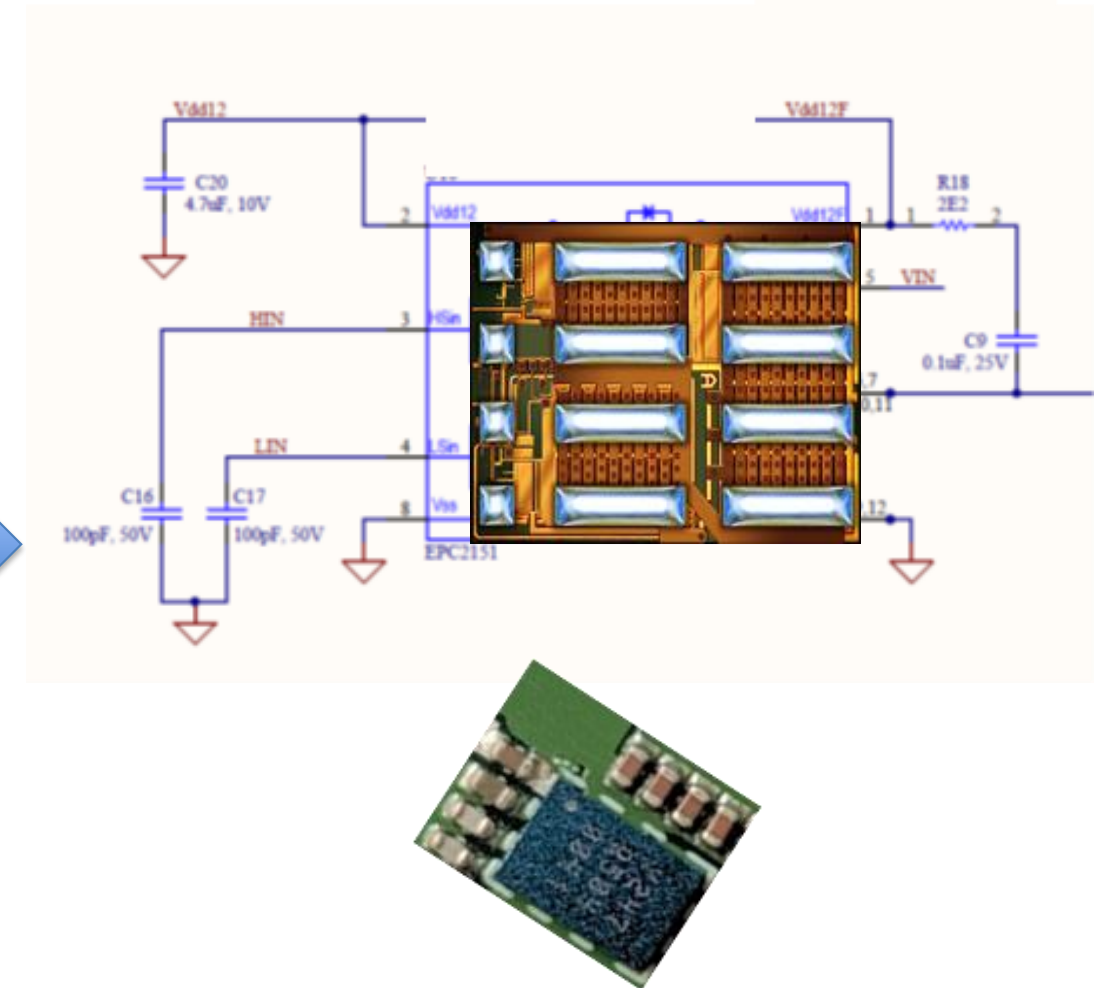
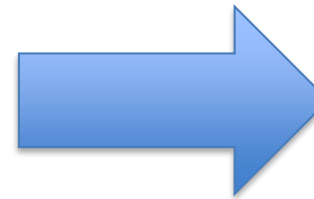
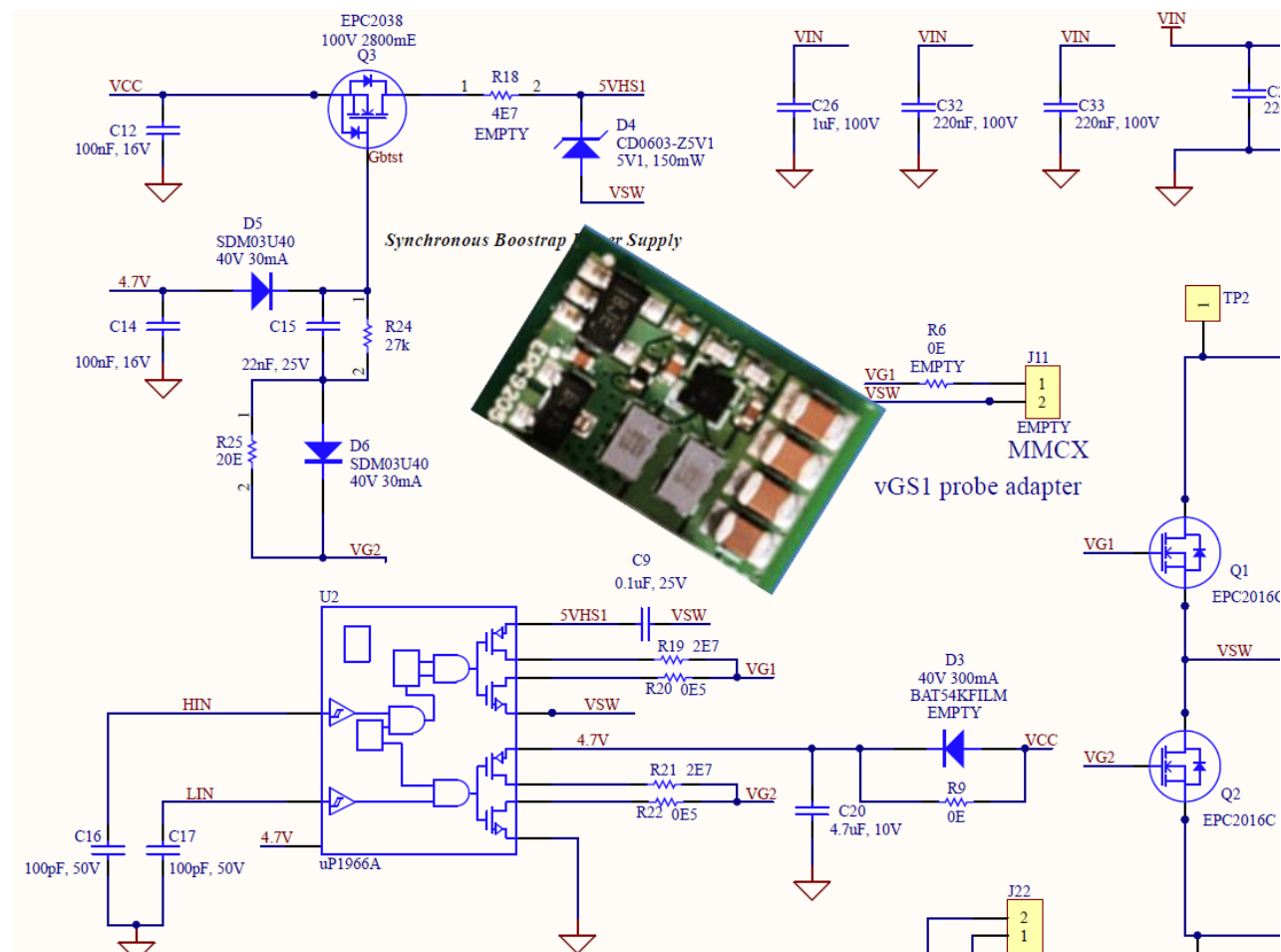
Being a lateral device, multiple GaN FETs exist side-by-side with **independent** voltage ratings.



# Phase 3: The Integrated Power Stage

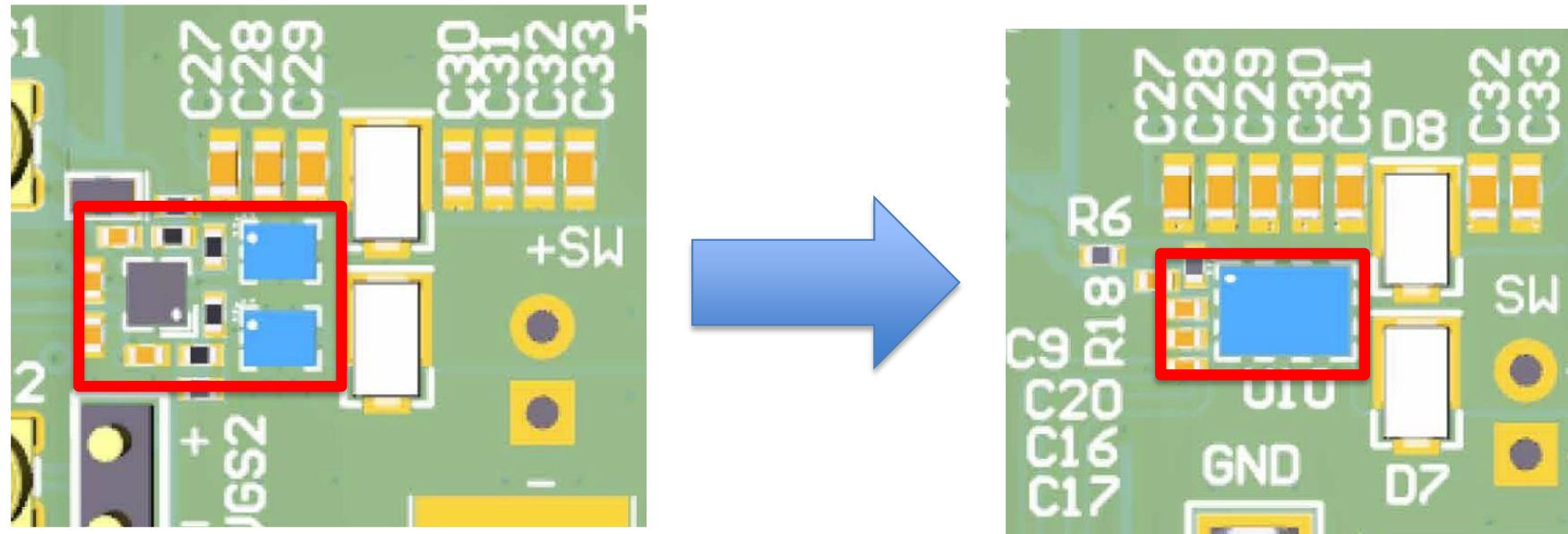


# EASY



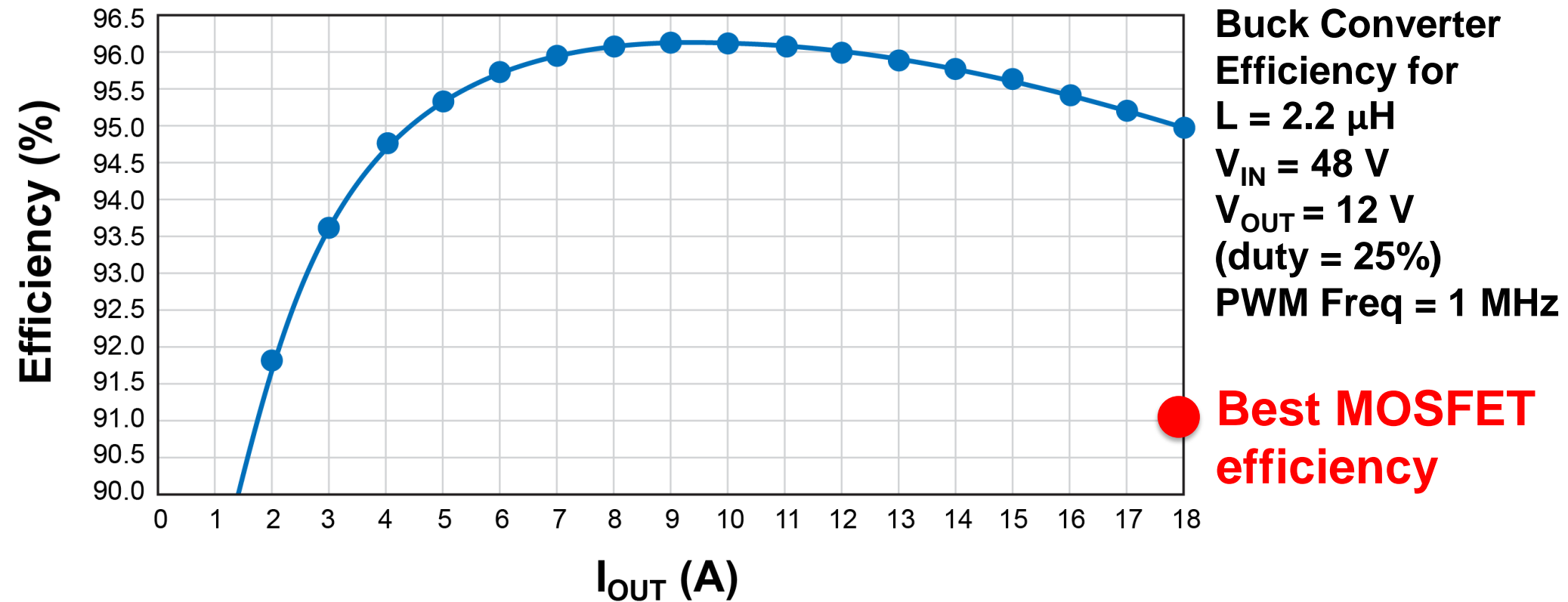
**50% Easier to Design**  
*LOGIC IN ... POWER OUT*

# SMALL



**33% Smaller in Size on PCB**  
Total number of components = 6 vs.13

# EFFICIENT



- **96%** Efficiency for 48 – 12 V Converter
- **40%** Lower Losses than MOSFETs

# Summary

- EPC's eGaN technology is developing rapidly
- GaN integrated circuits make products easier to design, smaller, faster, and more efficient
- Discrete devices are becoming obsolete