Industry Forum



pcim EUROPE ...digital days

GaNFast Power ICs: Past – Present - Future

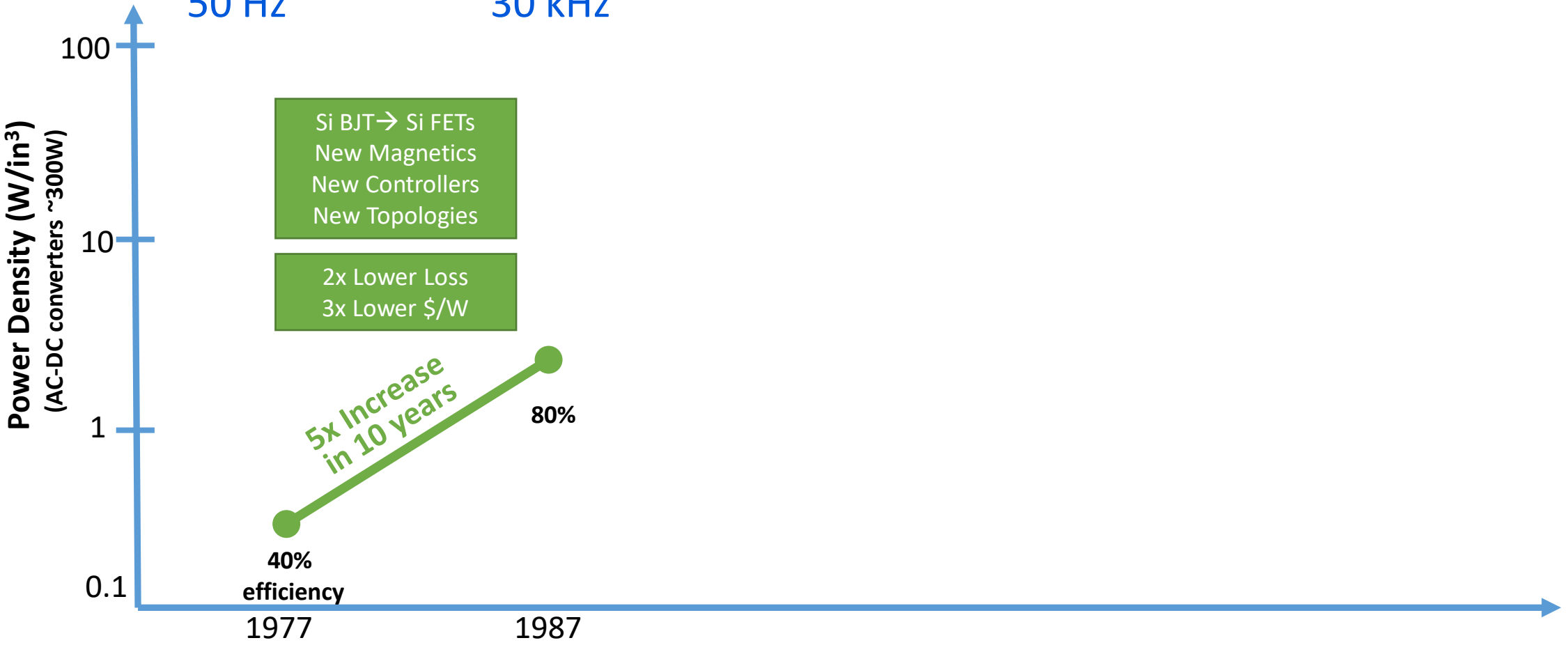
Stephen Oliver, Navitas Semiconductor

PCIM, July 7th, 2020

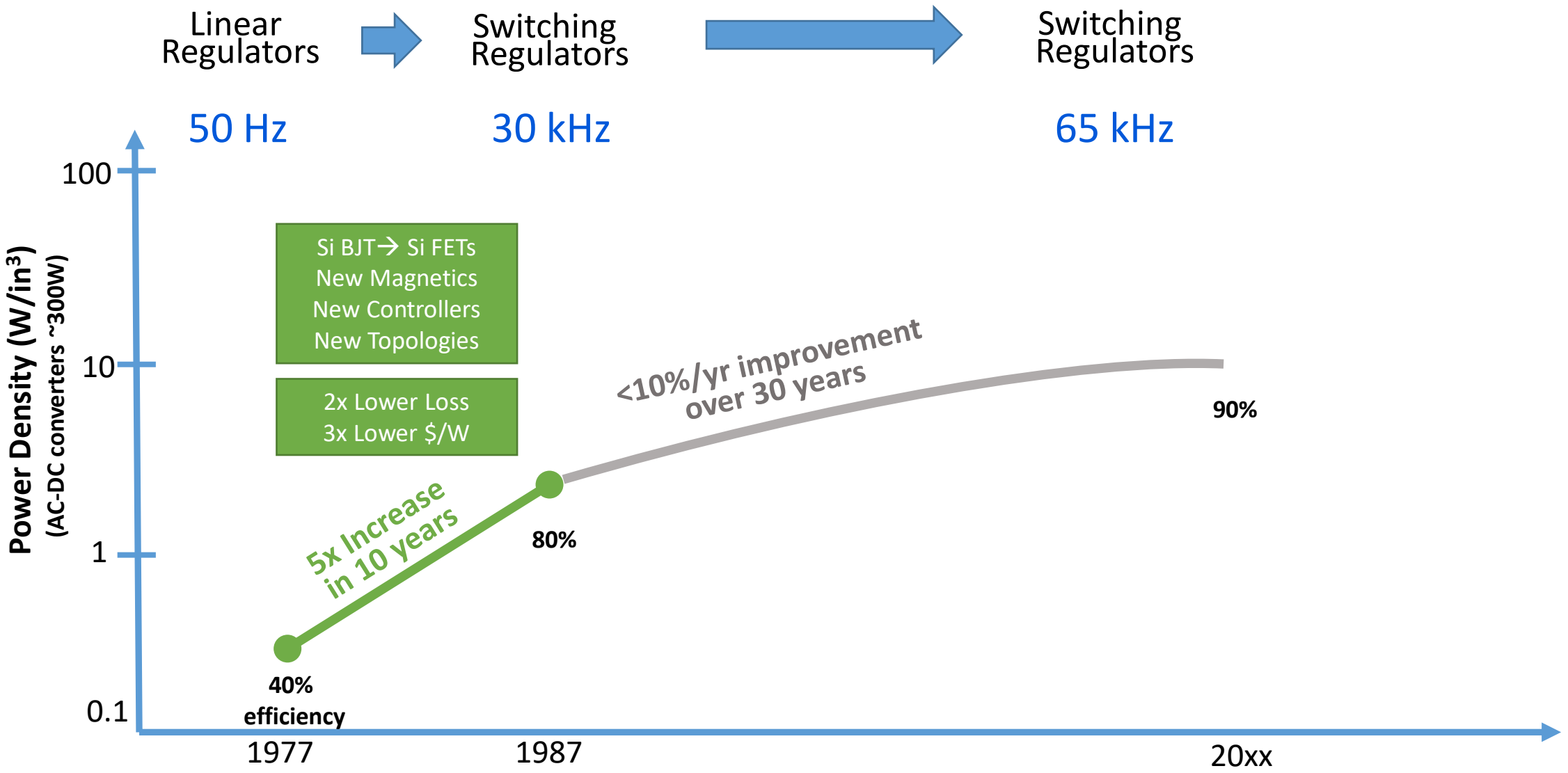
Power: Past

Linear Regulators → Switching Regulators

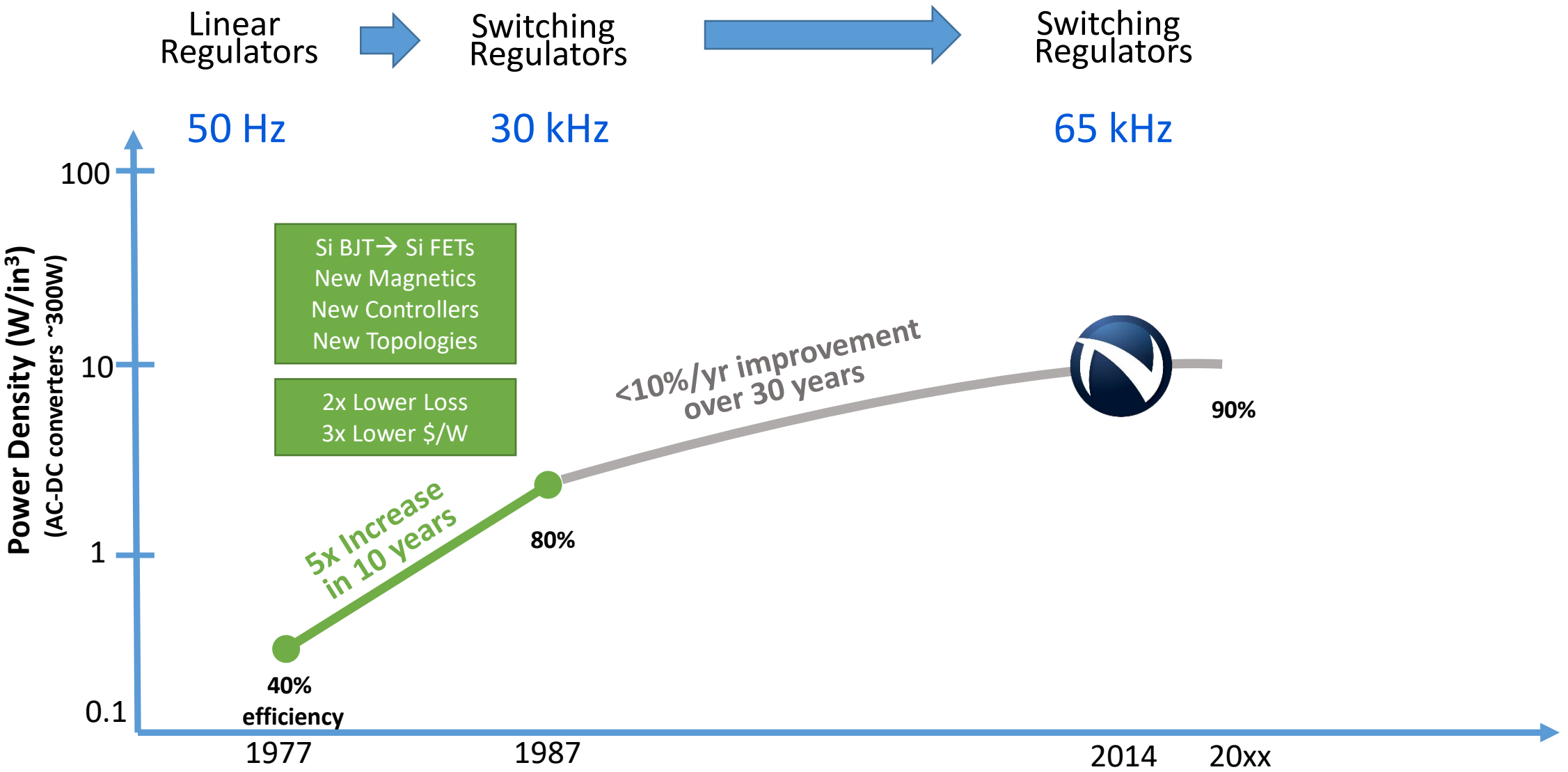
50 Hz 30 kHz



Power: Past - Present



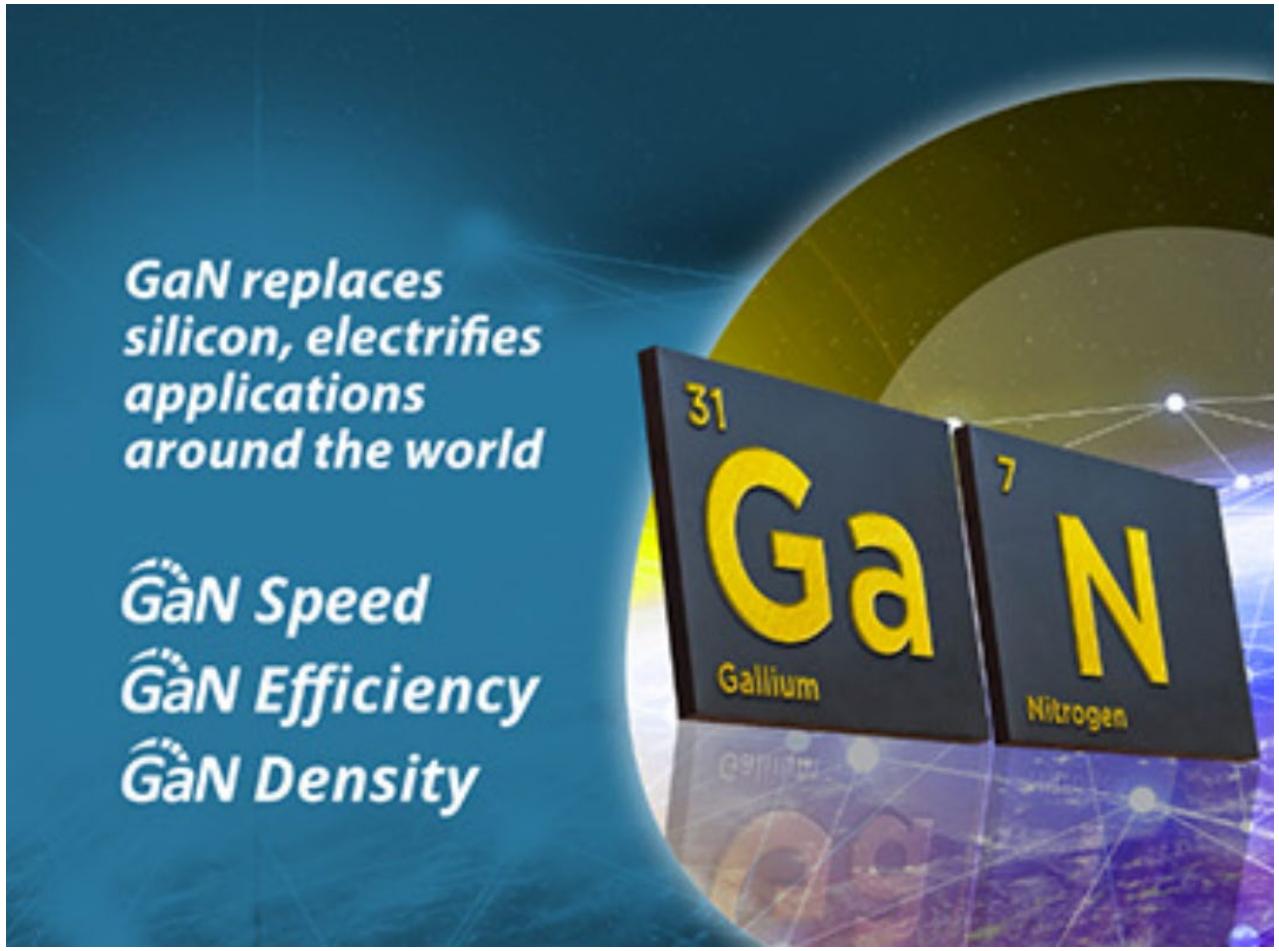
Power: Past - Present



Navitas Semiconductor Inc.

GaNFast™

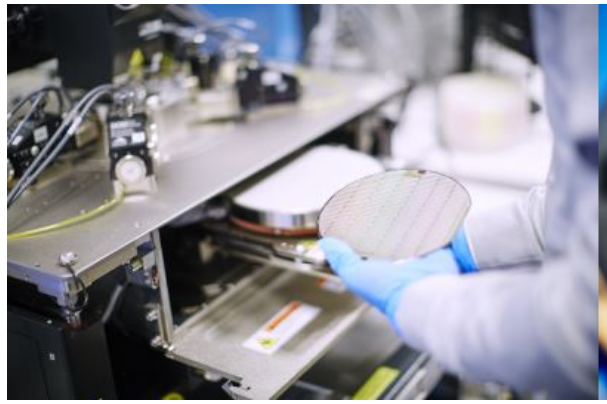
World's first & only GaN power IC company

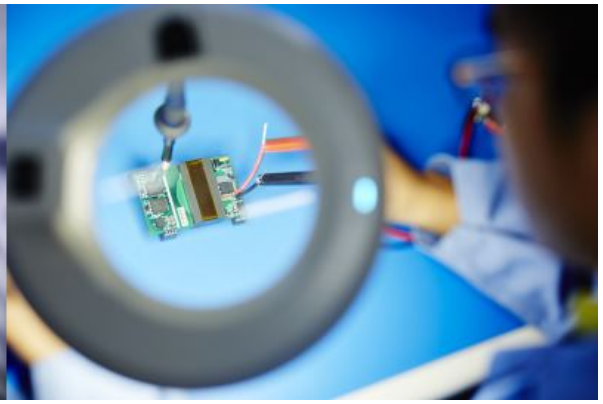


navitas

noun | en·er·gy





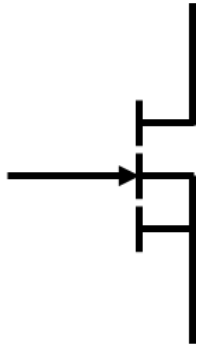


- World-class supply-chain partners
- Long-term, high-volume capacity
- Qualification ‘beyond JEDEC’
- High quality performance (0 ppm)



World's First GaNFast™ Power ICs

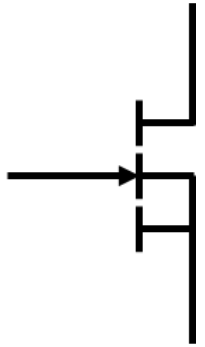
Fastest, most efficient GaN Power FETs



>20x faster than silicon
>5x faster than cascoded GaN

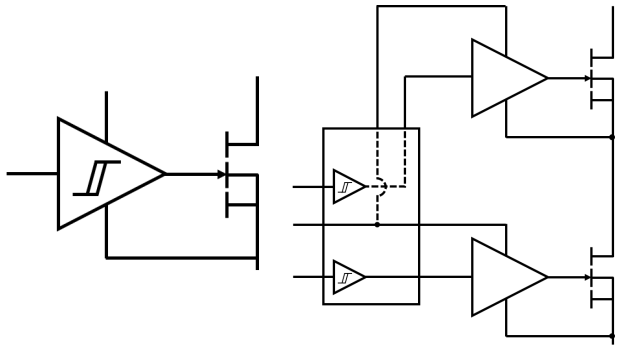
World's First GaNFast™ Power ICs

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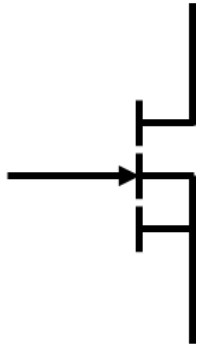
First & Fastest Integrated GaN Gate Drivers



>3x faster than any other gate driver

World's First GaNFast™ Power ICs

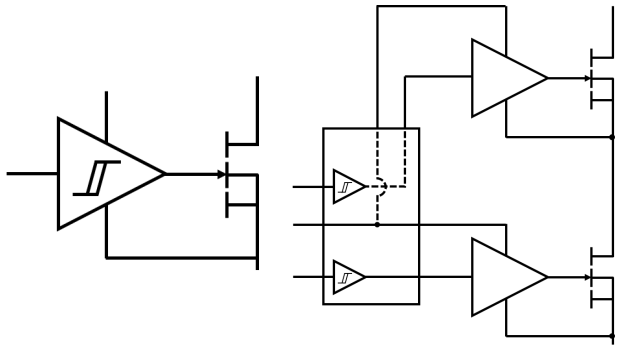
Fastest, most efficient GaN Power FETs



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+

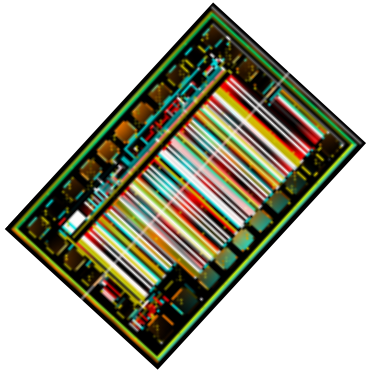
First & Fastest Integrated GaN Gate Drivers



>3x faster than any other gate driver

=

World's First GaNFast™ Power ICs



- 100+ patents
  - AllGaN™ PDK
    - Integrated gate drive
    - Half-bridge
    - Level-shifting
    - Autonomous protection
    - …and more
  - Low-inductance packaging
  - High-frequency systems
  - Application use cases



Big Names Go GaNFast™

小米 xiaomi.com

65W USB-C
53 cc, 1.2 W/cc





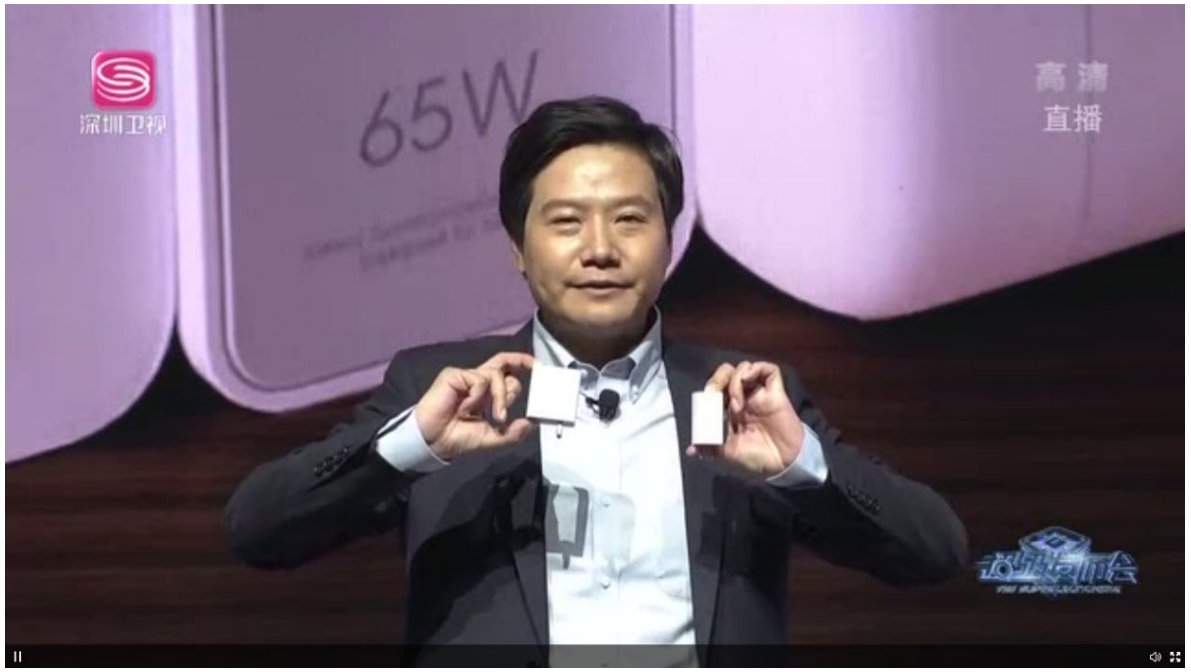
Lenovo

65W USB-C
63 cc, 1 W/cc



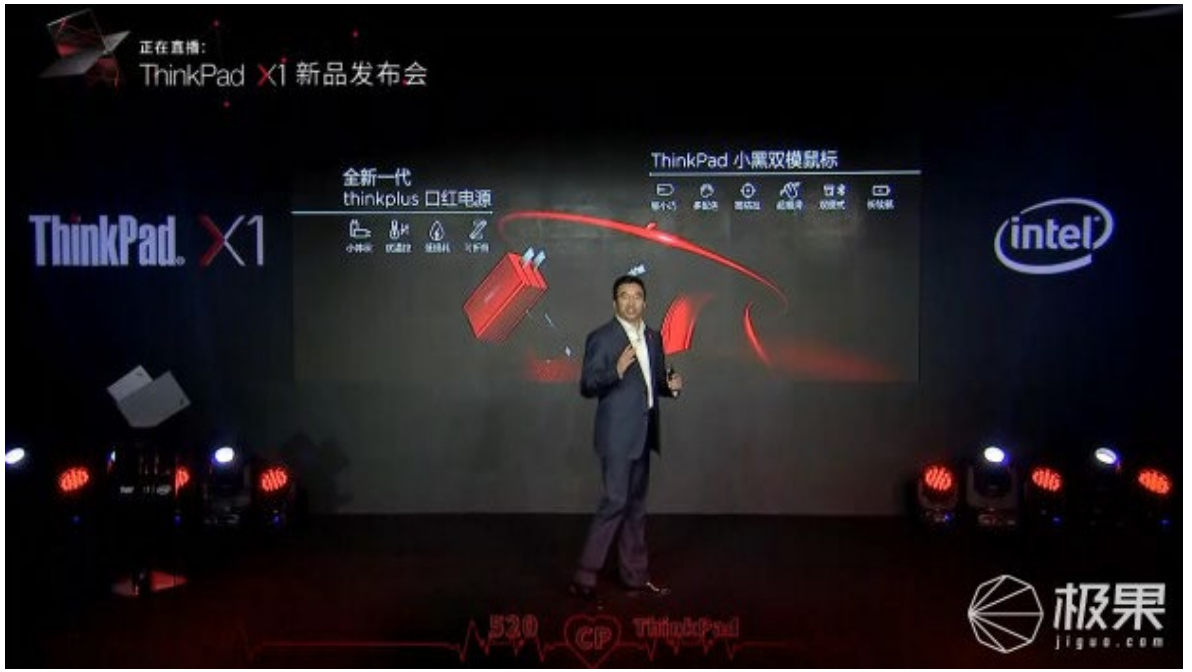


Thinkpad X1 Carbon 2020



"How tiny is this GaN charger?"

Mr. Jun LEI, Xiaomi CEO: Mi 10, Mi 10 PRO launch 13th February 2020



"This is the next generation of chargers"

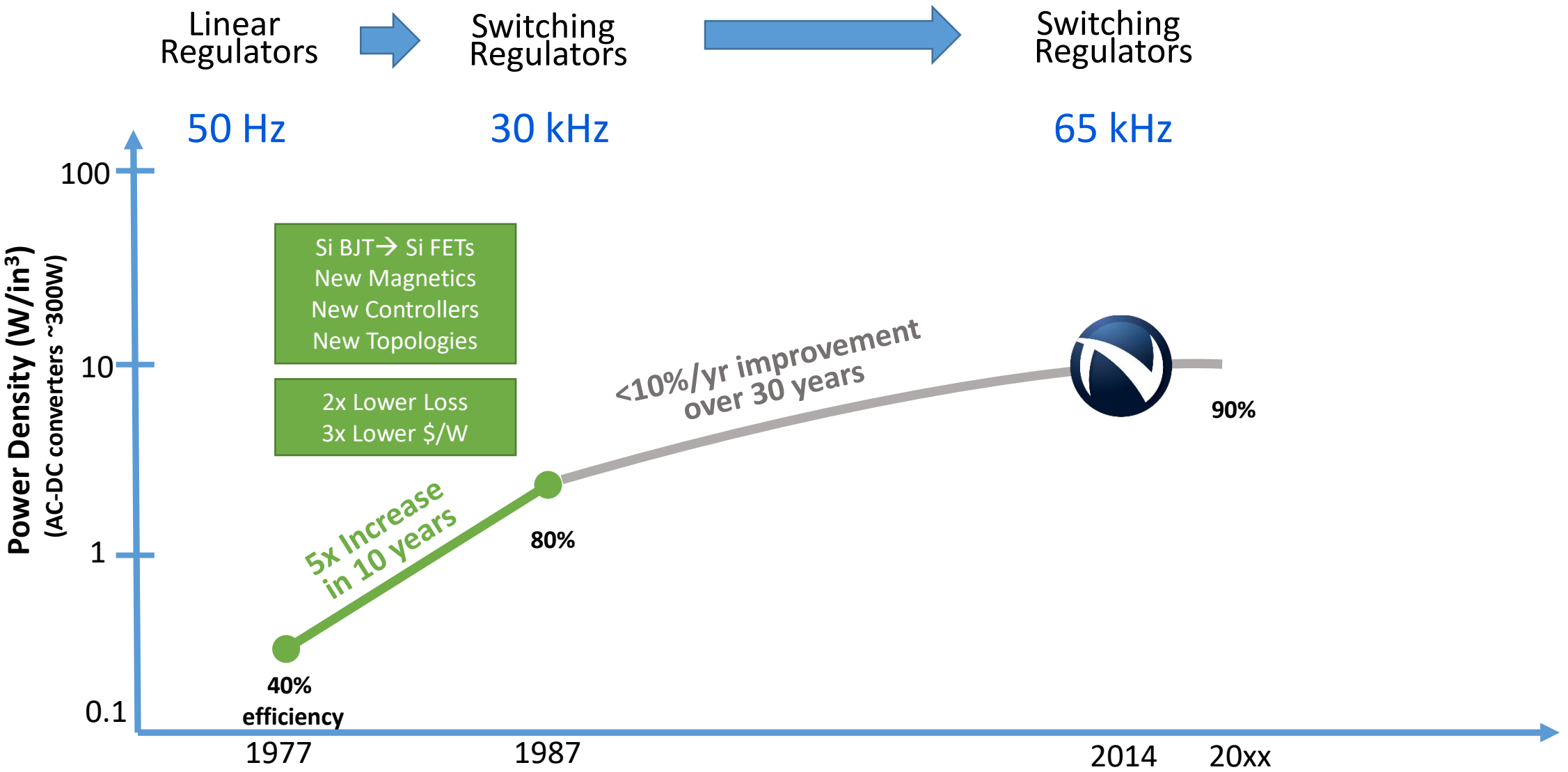
Mr. Wang Zhong, VP Lenovo Group: Thinkpad X1 Carbon, Yoga launch 20th May 2020

World's Fastest Laptop:
Asus ProArt StudioBook One
NVIDIA Quadro RTXTM 6000

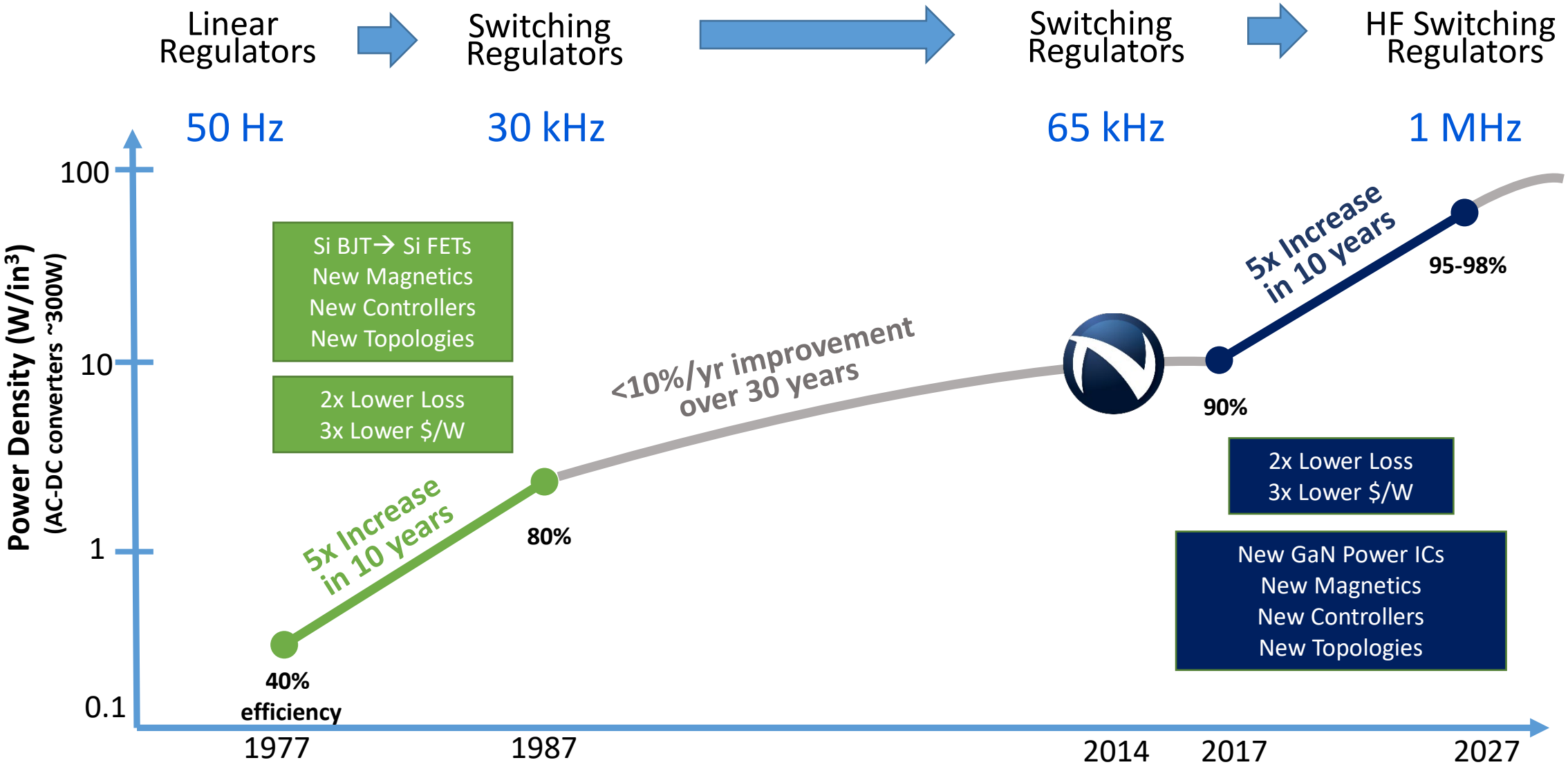
300W in 92 x 92 x 28 mm
= 237 cc
= 1.3 W/cc



Power: Past - Present



Power: Past - Present - Future





Here come the GaN chargers

Visit www.GaNFast.com for more!