



Device Characterization Matters

2024-04-26

A Presentation made for
10th Year Celebration of Incize

By Dr. Wayne Ni

CanaanTek

Becoming world's leading RF design company
Innovation Efficiency Excellence and Win-Win

Cooperation of a RFSOI Switch Tuner Project



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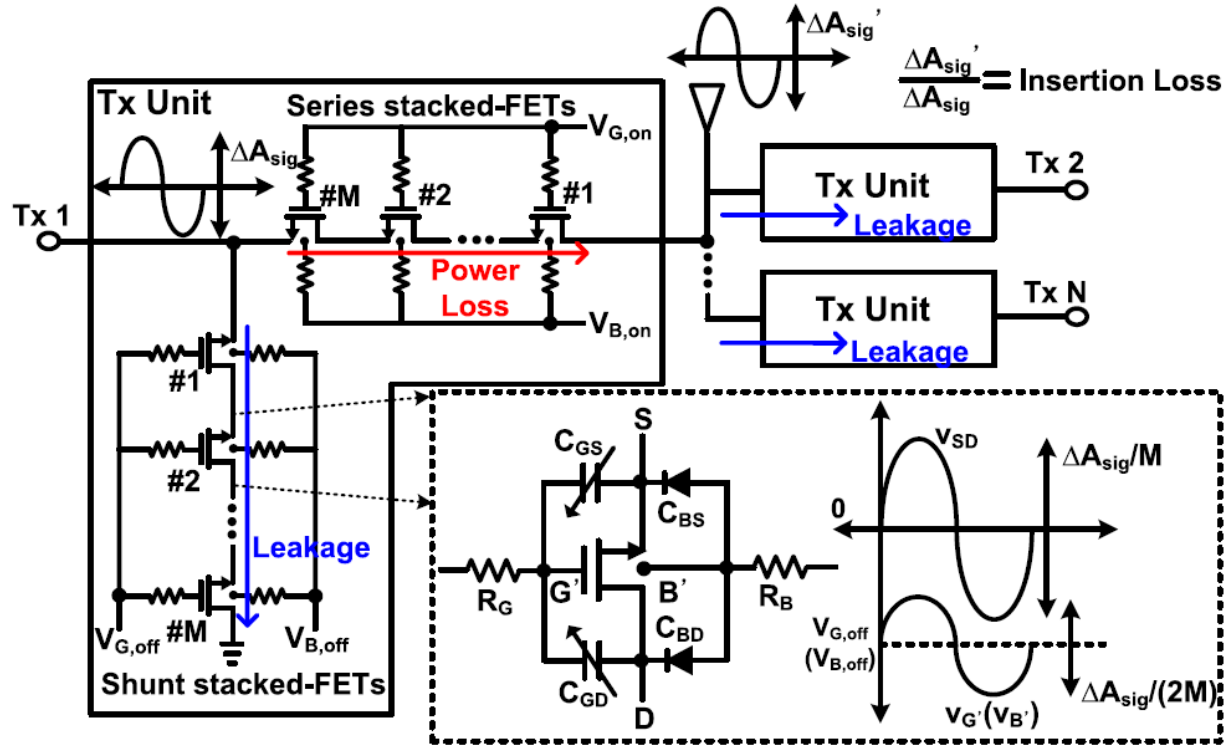
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CanaanTek et INCIZE Belgium concluent un partenariat stratégique : Innovation sur le syntoniseur d'antenne RFSOI

August, 2022

Why did we go hand in hand with Incize - Characterization

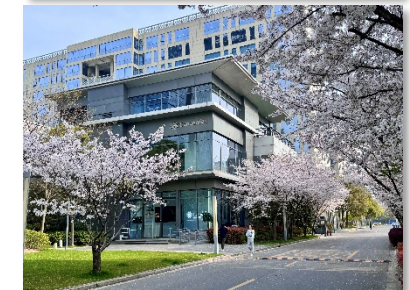
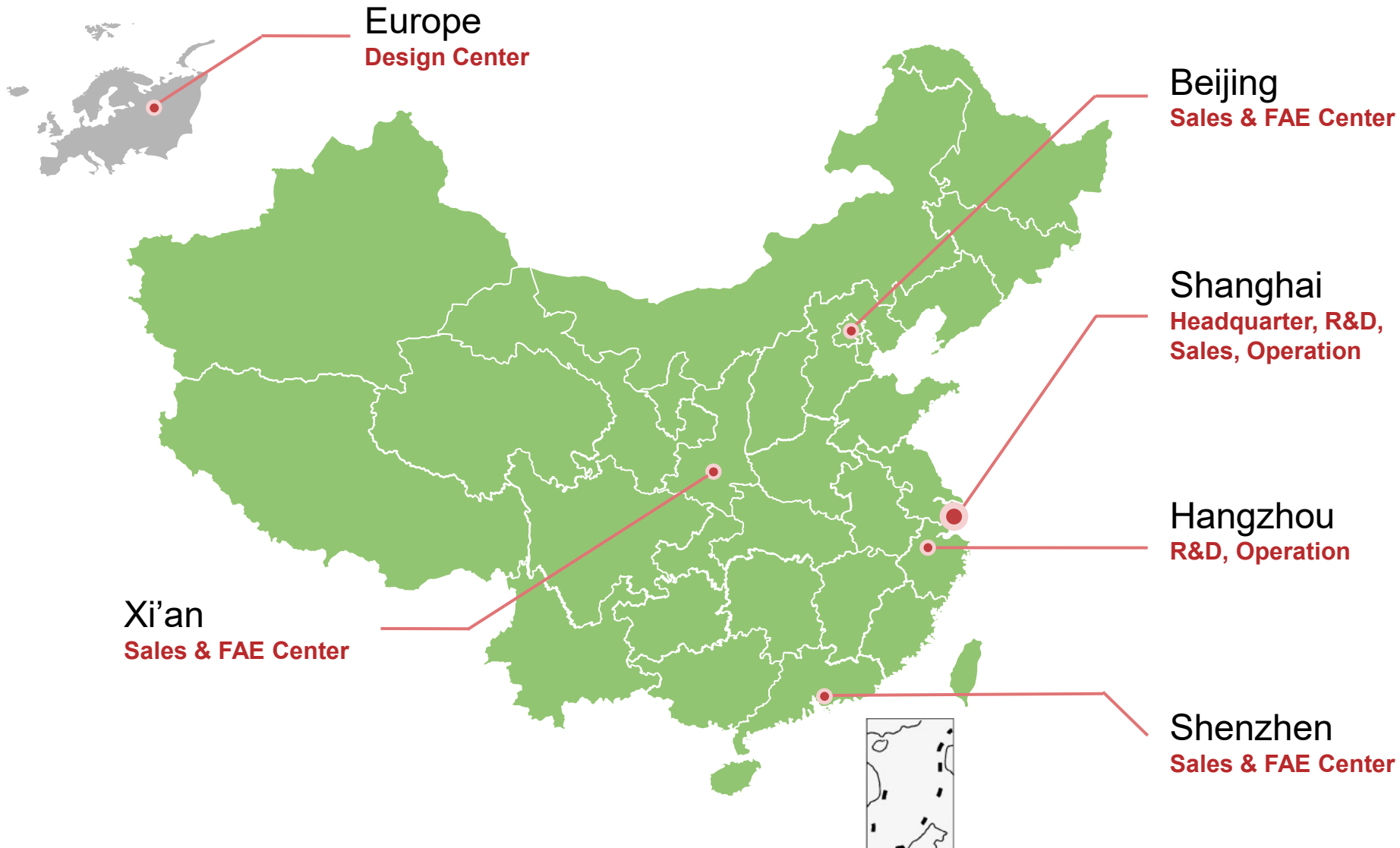


Challenges:

- ❑ High Break down voltages (up to 80V)
- ❑ Insertion Loss / Isolation
 >> Best FoM ($R_{on} \times C_{off}$)
- ❑ High power
 - ❑ High H2/H3 linearity
- Design optimization:
Tx sizing, number of FETs
- Pcell device optimization

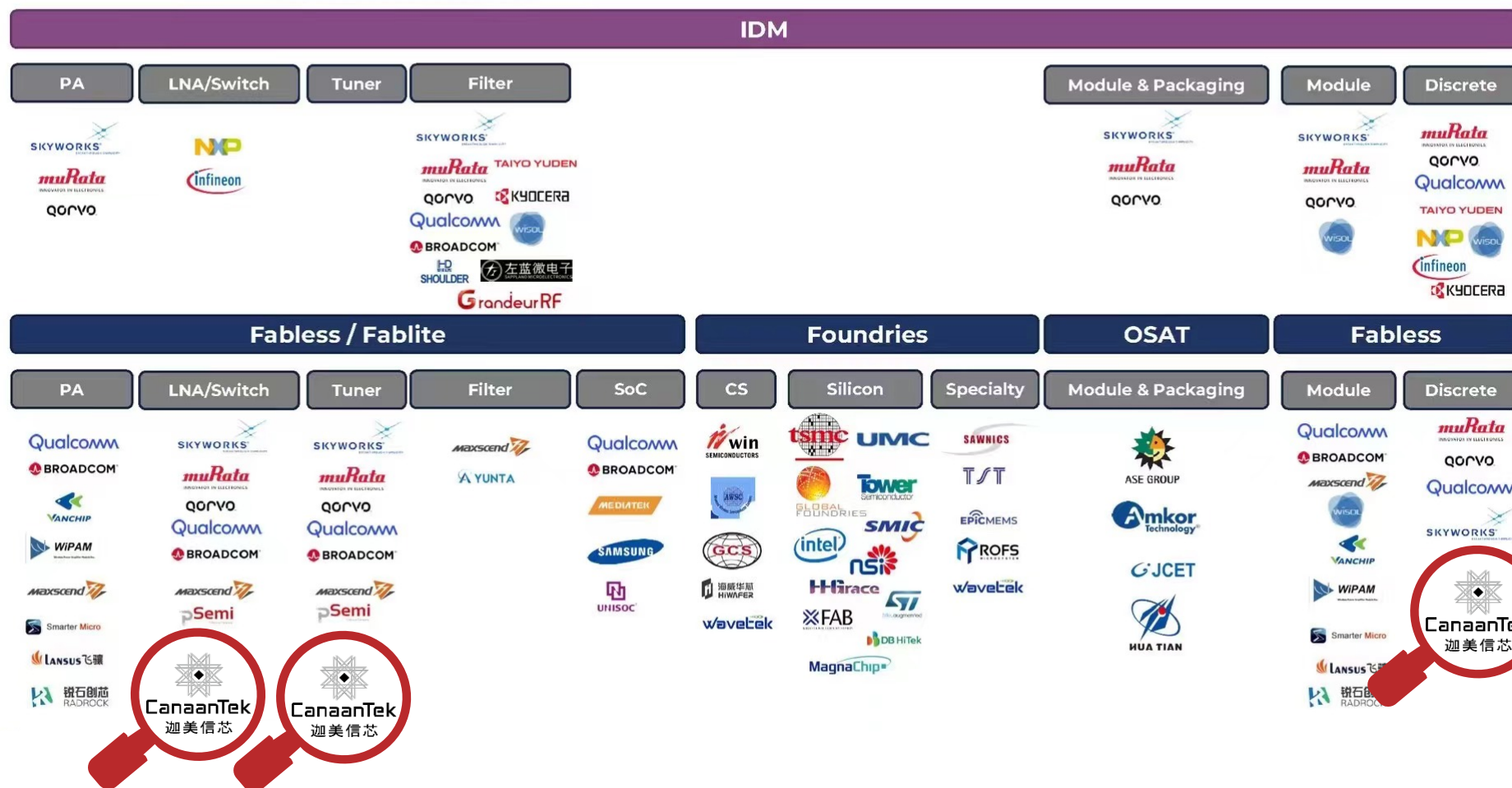


About CanaanTek



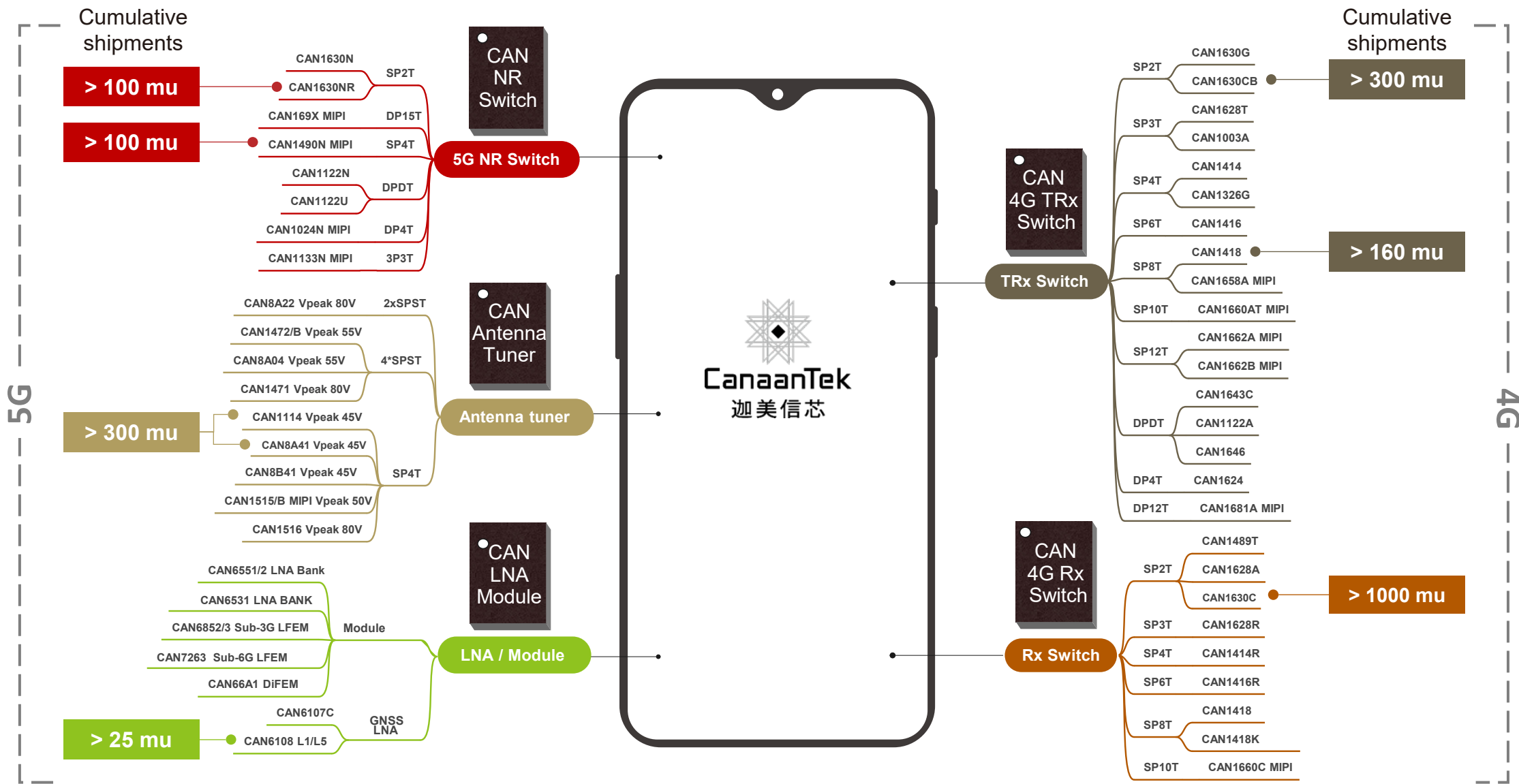
CanaanTek in the RF Ecosystem

RF COMPONENTS ECOSYSTEM



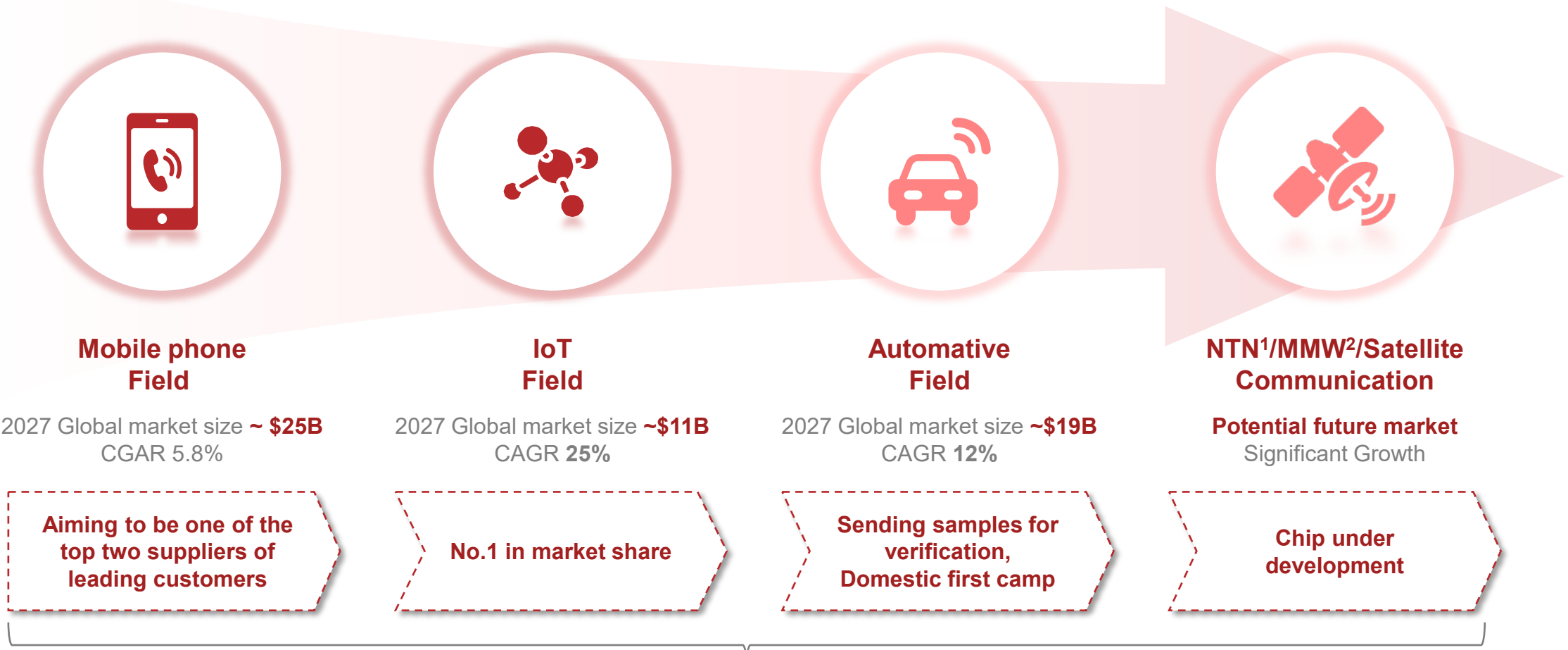
* Source: Yole 2023

Existing product lines covering 4G and 5G applications





Application extension to automotive and satellite



The total accessible market for CanaanTek is forecasted to be well over **\$55 Billion**

* 1) NTN: Non-terrestrial Network; 2) MMW: Millimeter Wave
*Sources: Yole; Qorvo; IDC

CanaanTek develops high-performance tuners for 5G/6G

Antenna tuner

- A powerful signal booster for mobile terminals



Huawei Mate 60 Pro



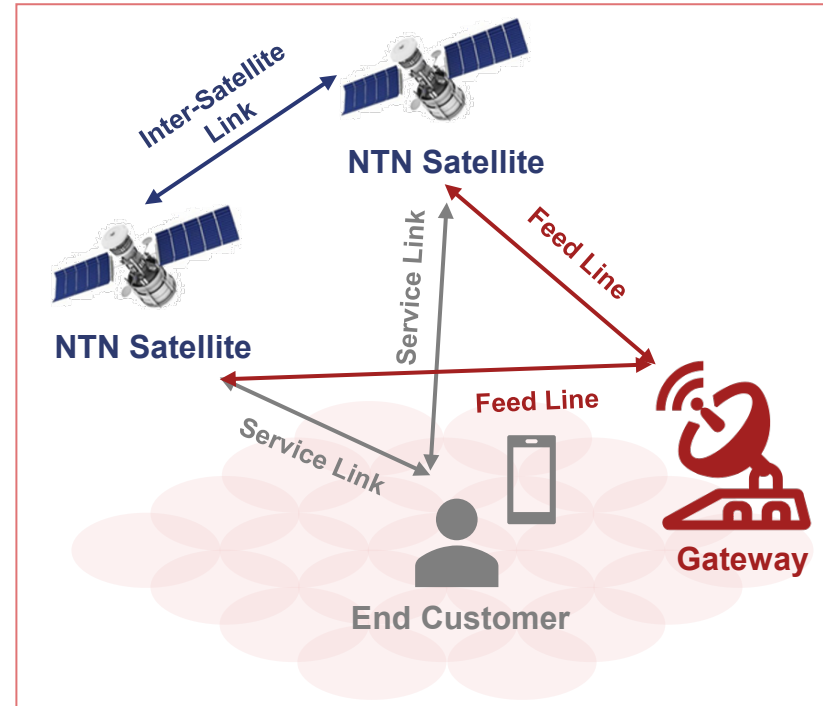
Xiaomi 5G super antenna



- Signal quality and communication experience have become the highlights of mobile phones, which must be **paired with high-performance antenna tuners**

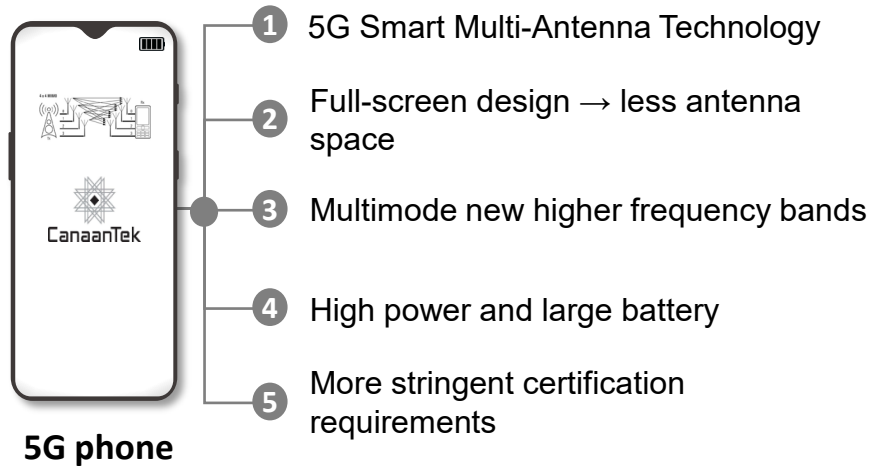
CanaanTek's Antenna Tuner for Satellite Communication Applications

- CanaanTek's high-performance antenna tuners and ultra-low noise amplifiers provide excellent antenna solutions for customers to receive communication satellite signals in general 4G/5G smartphones



CanaanTek's technology realizes low power consumption

Challenges for antenna tuners in the 5G era



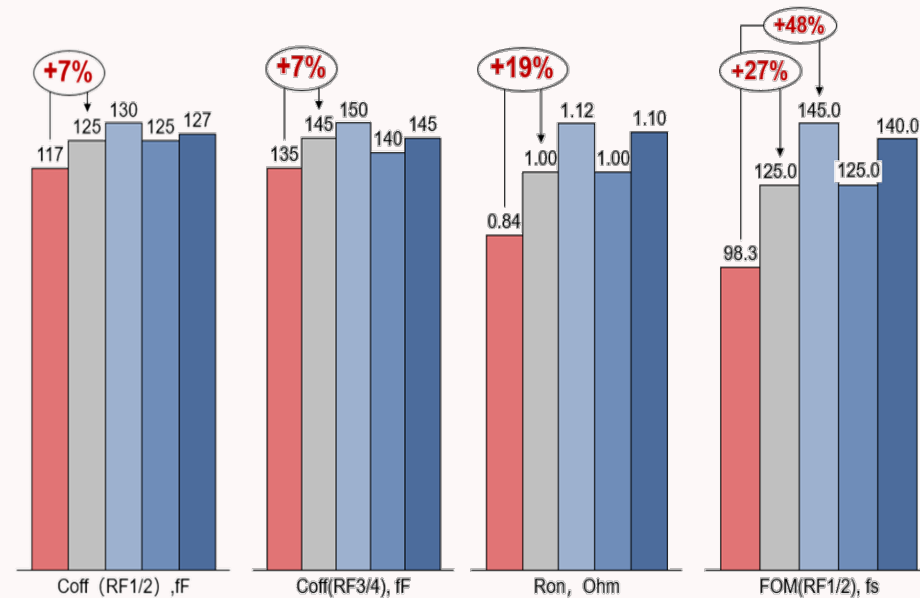
Miniaturization

High breakdown voltage

High Performance

C_{FOM} = FOM optimization technology to provide optimal FOM values

FOM



Enhanced performance
Lower power consumption
Faster throughput rate

10% lower than the competition

Thank You

CanaanTek

CanaanTek

Becoming world's leading RF chip design company
Innovation Efficiency Excellence Win-Win