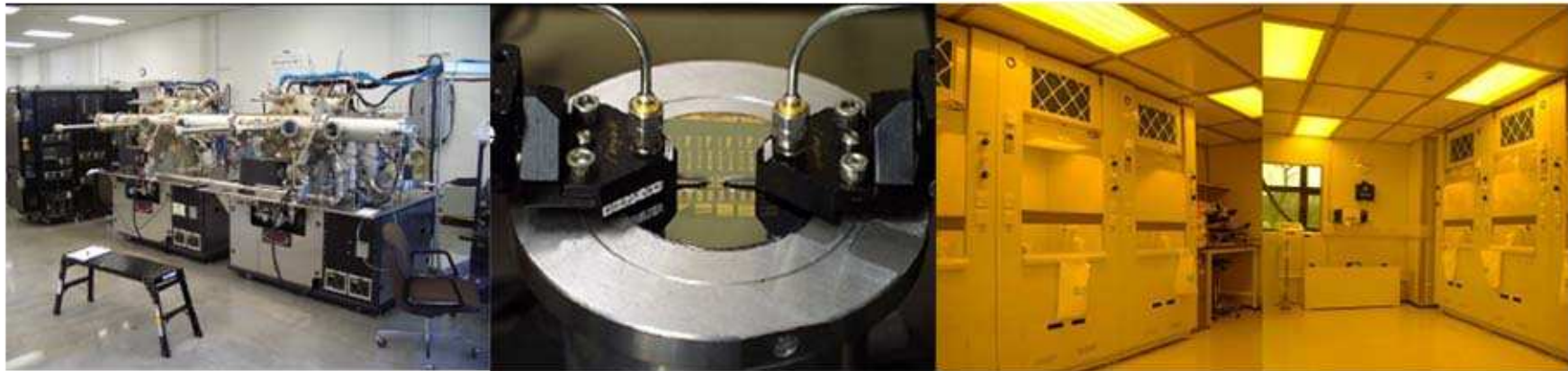




**World Leaders in Ultra High Frequency Components**

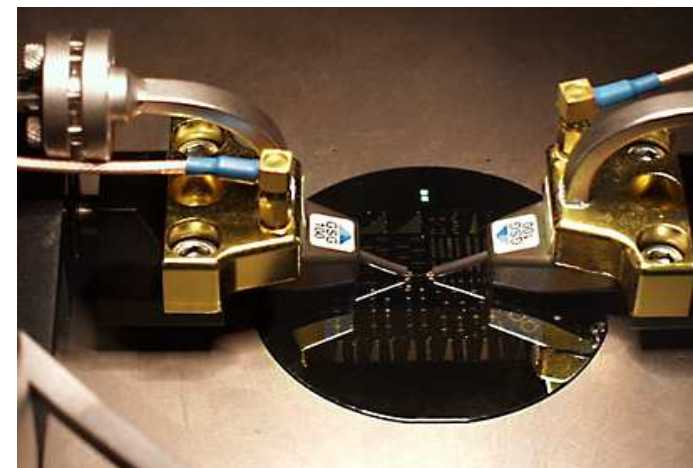
A UK source of mm-wave integrated circuit technology  
for homeland security applications



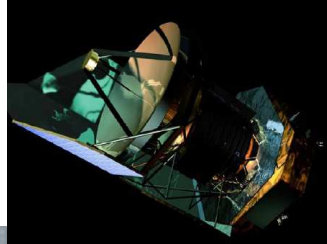


- Spin-out from Glasgow University June 2007
- Scottish Enterprise Proof of Concept Funding enabled migration of leading performance mm-wave integrated circuit (MMIC) research technology to commercial entity

- XanIC offer UK source of MMIC technology
  - Low noise amplifiers, mixers, oscillators, switches
  - Medium and high power amplifiers
  - Fully integrated front-end transceivers



# Markets for mm-wave components



**XanIC MMIC technology will facilitate exploitation of 50 – 500 GHz spectrum**



## Communications

- Next generation combat radio
- Optical and broadband microwave communications

## Homeland Security Scanners

- Portal security scanners
- Stand-off security cameras for public places
- Handheld detectors for police and special forces

## New Applications

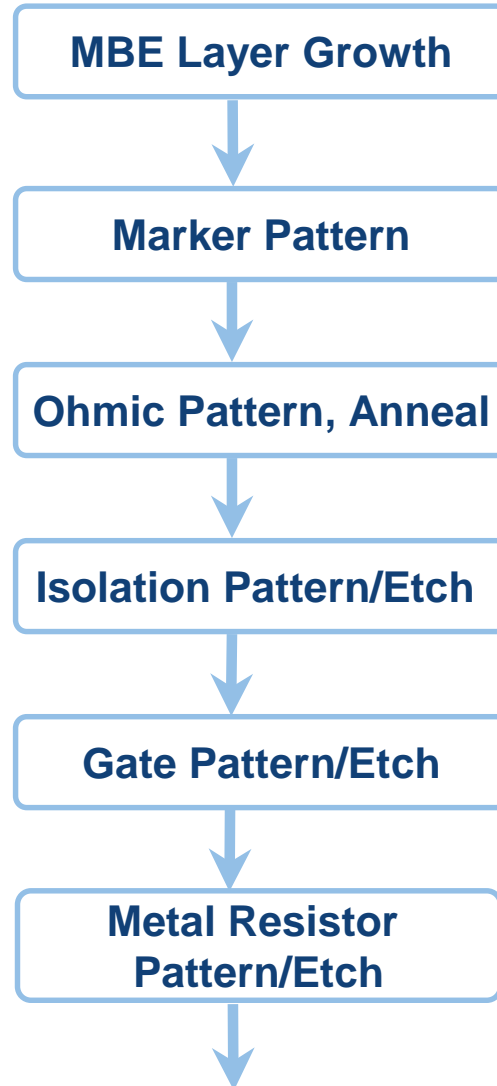
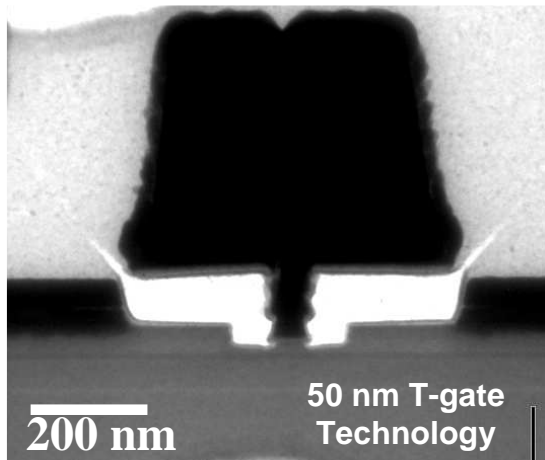
- Automotive collision avoidance radar
- Airport runway debris detection
- Helicopter & aircraft blind landing systems

## Imaging & Sensors

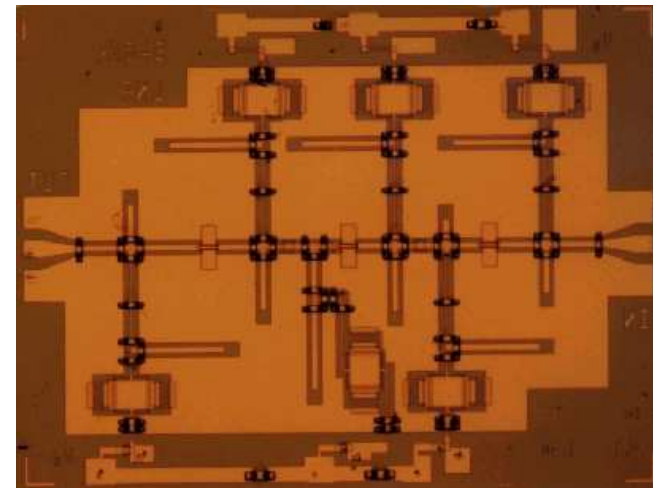
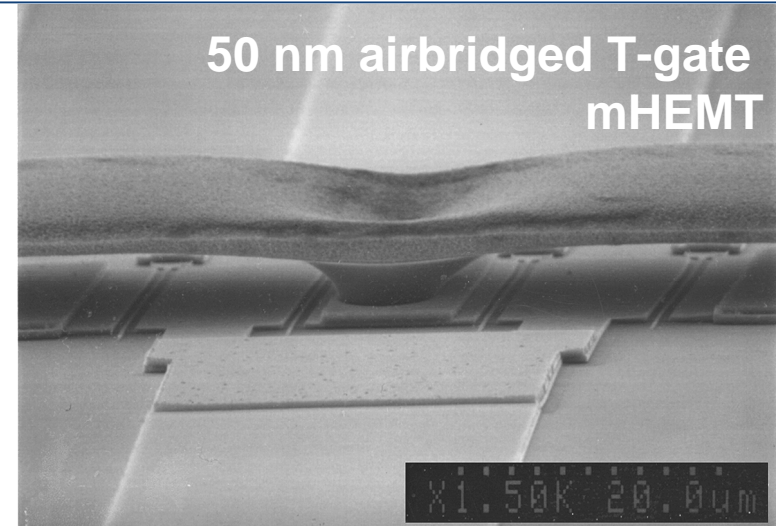
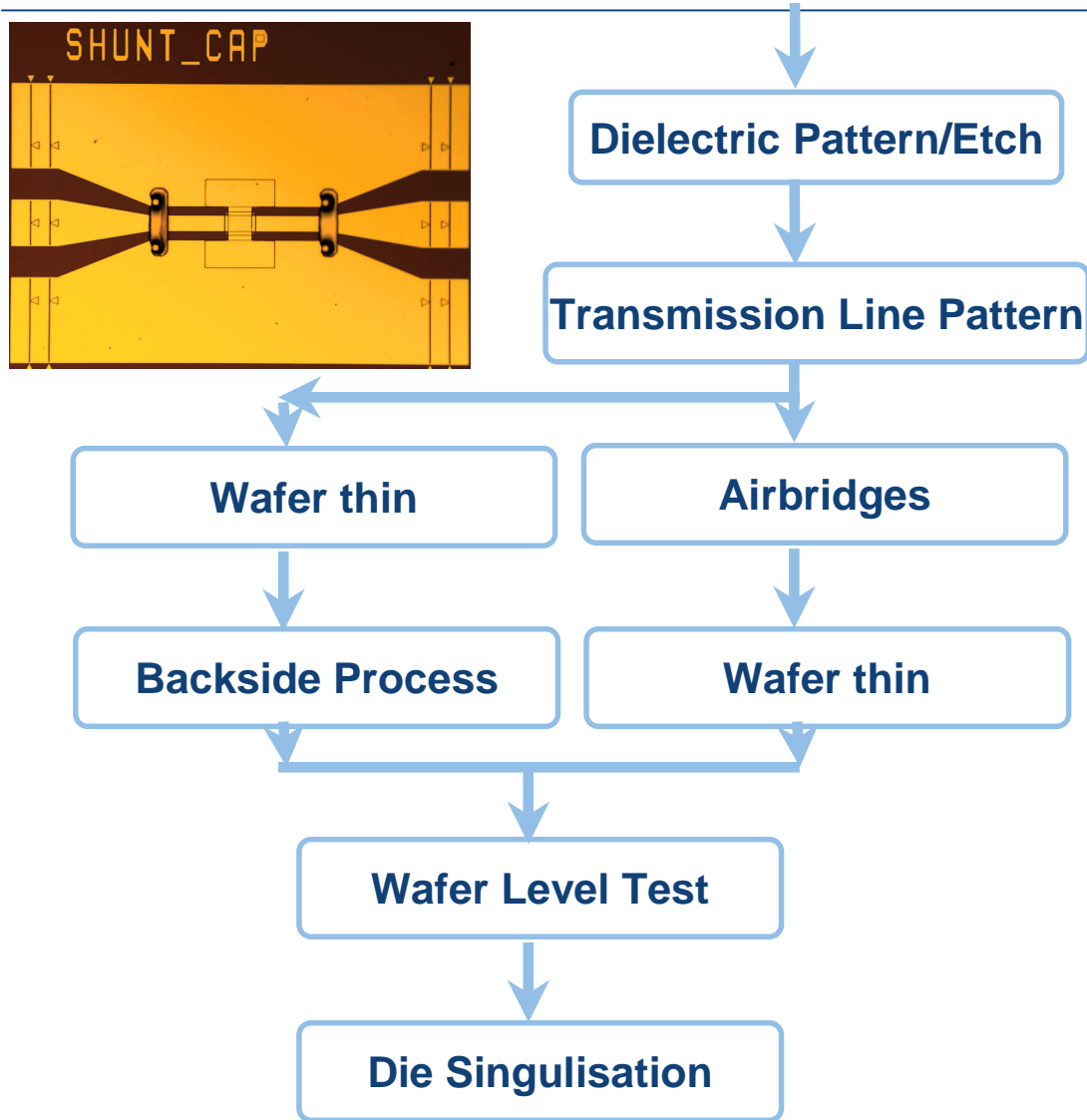
- Missile sensors
- Environmental sensing
- Explosives
- Medical imaging

- To be the partner of choice for mm-wave MMICs
- To work with the leaders in the industry in driving the performance boundaries of mm-wave MMIC technology
- To develop and manufacture a range cost-effective catalogue parts targeted at volume applications
- To work with our partners on custom-specific parts for specialist applications, demonstration units etc
- To work with selected lead partners who are looking to produce their own designs based on the XanIC process

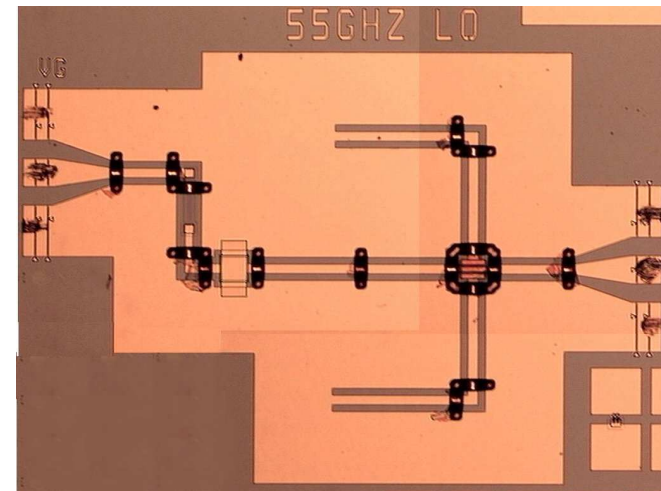
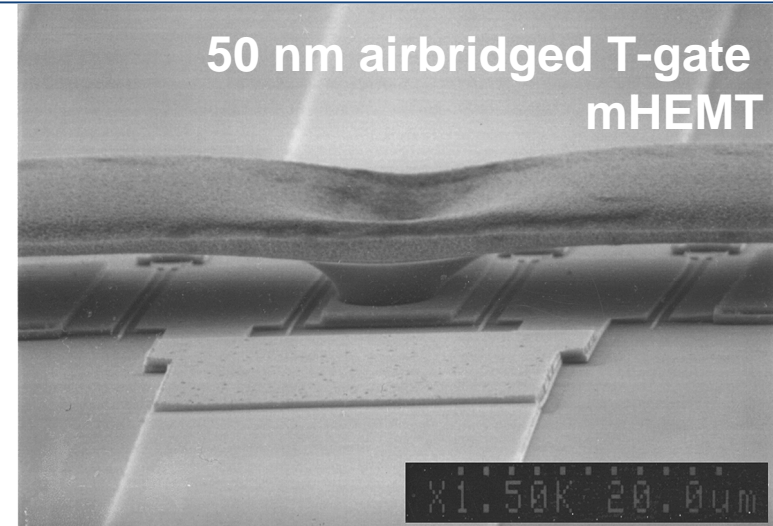
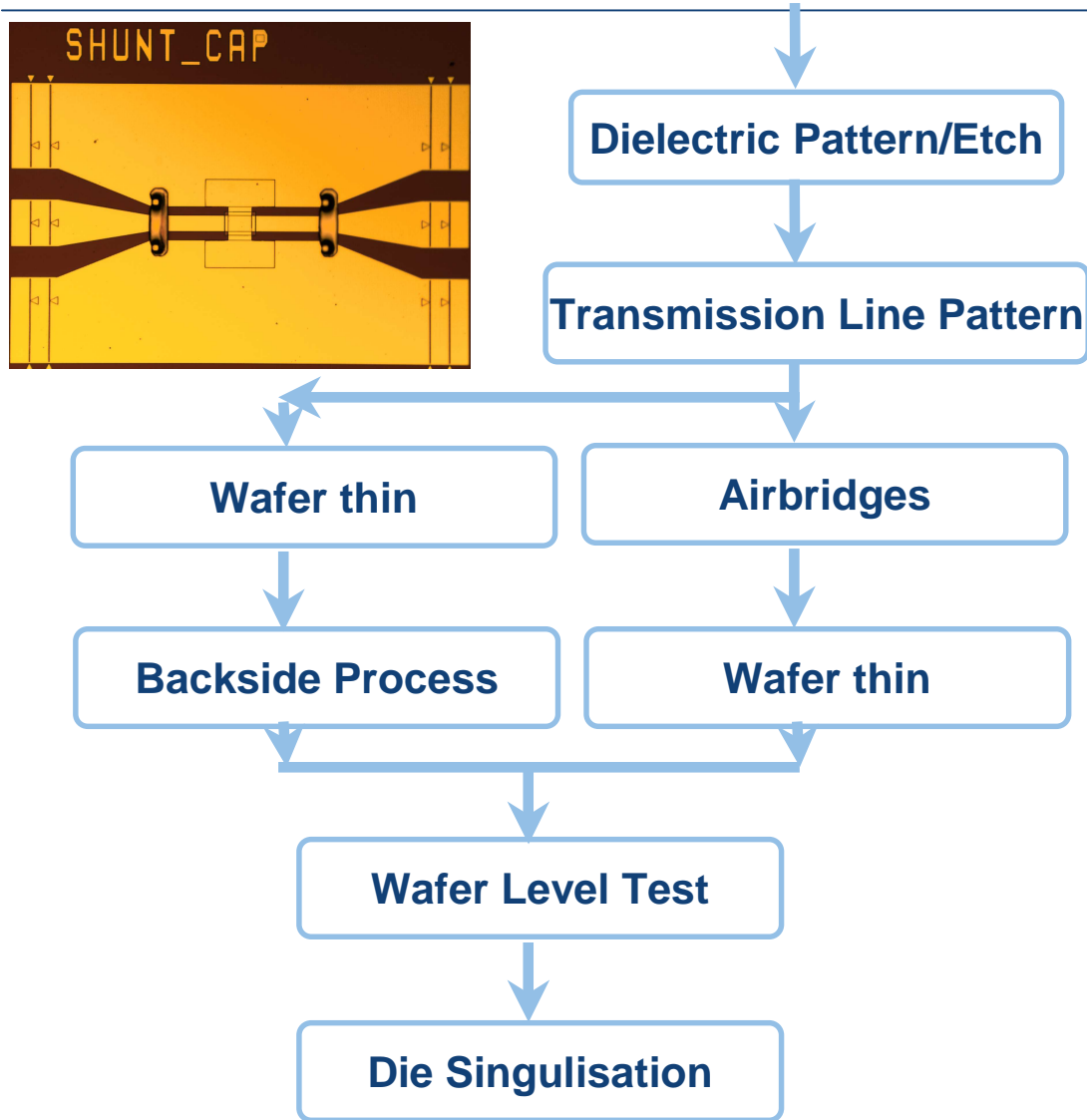
# Our Technology



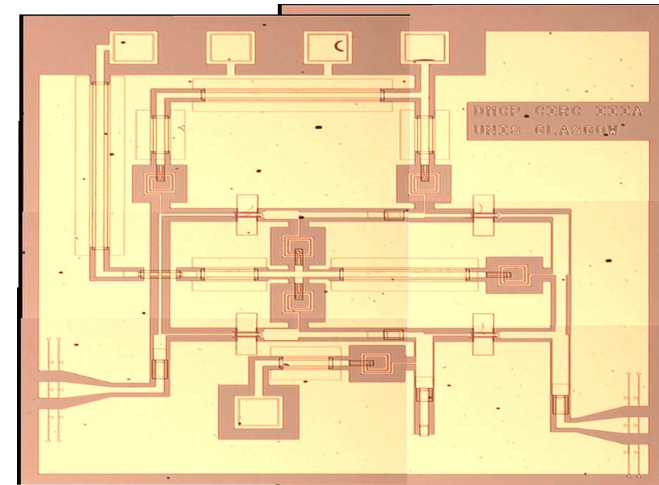
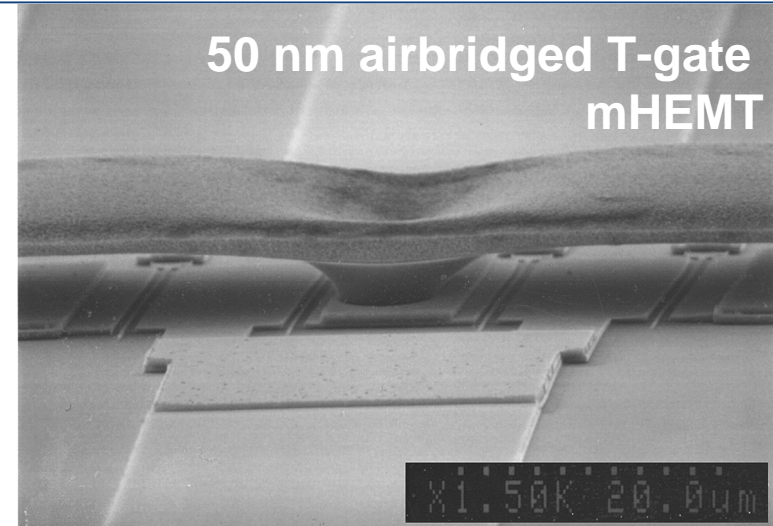
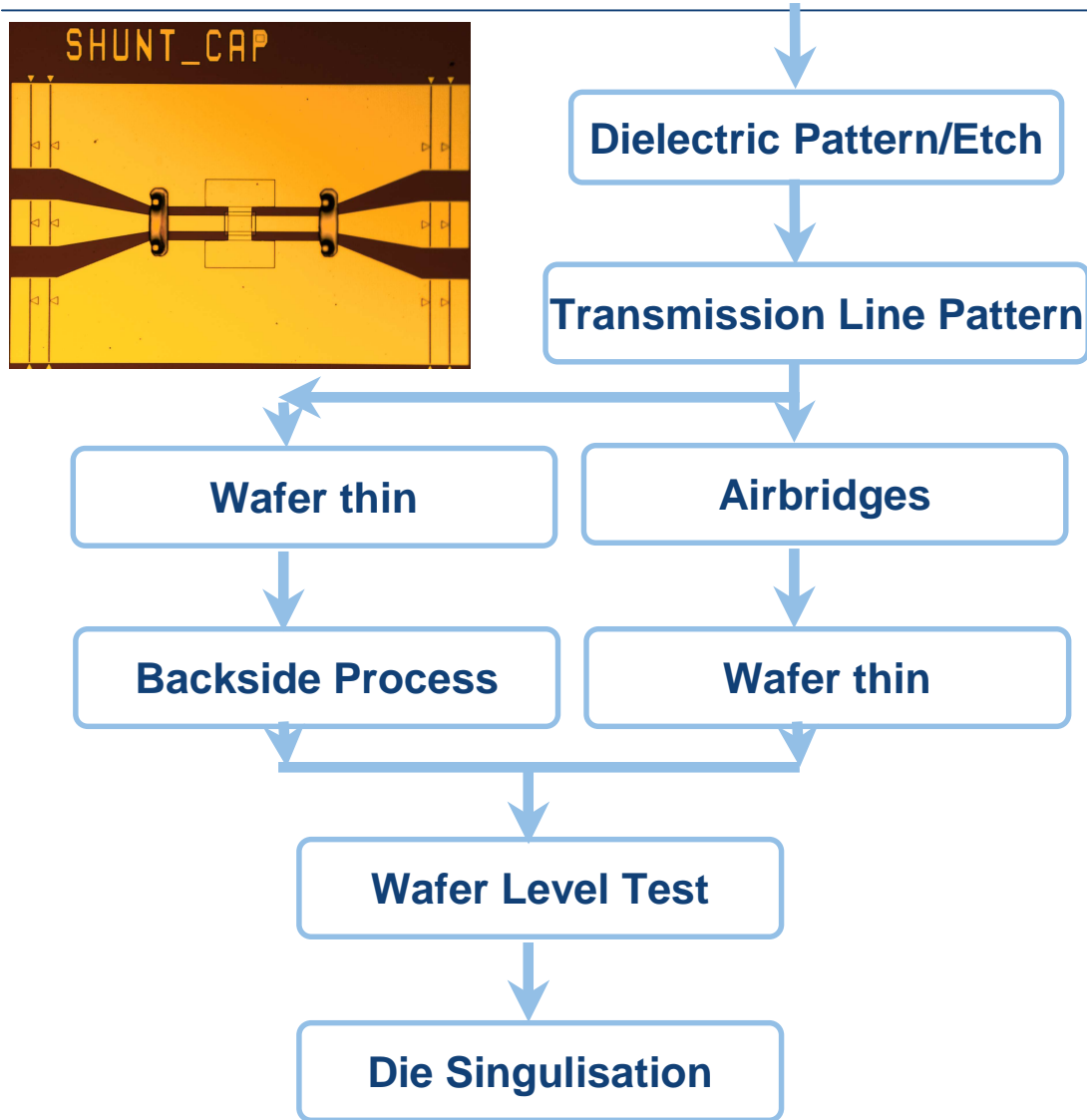
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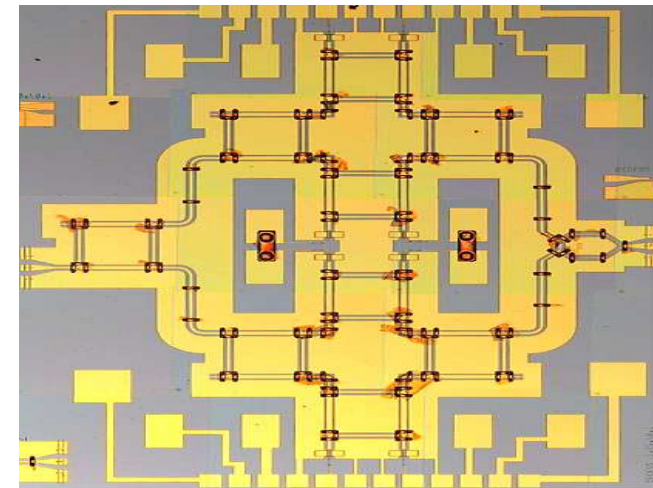
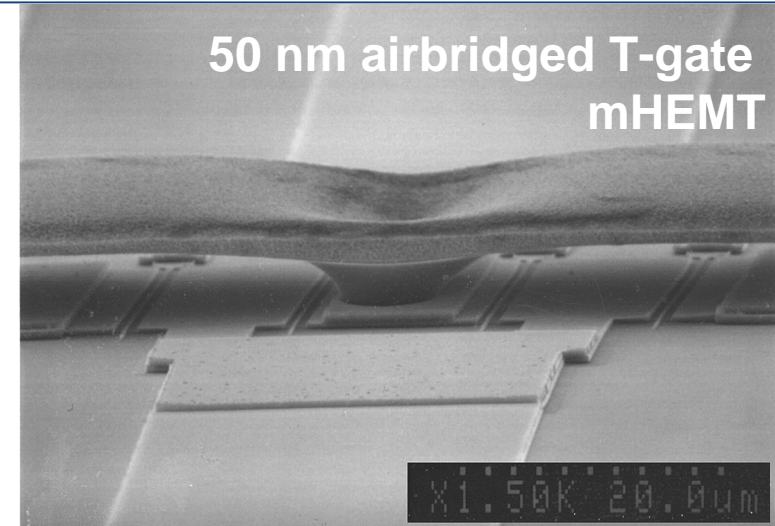
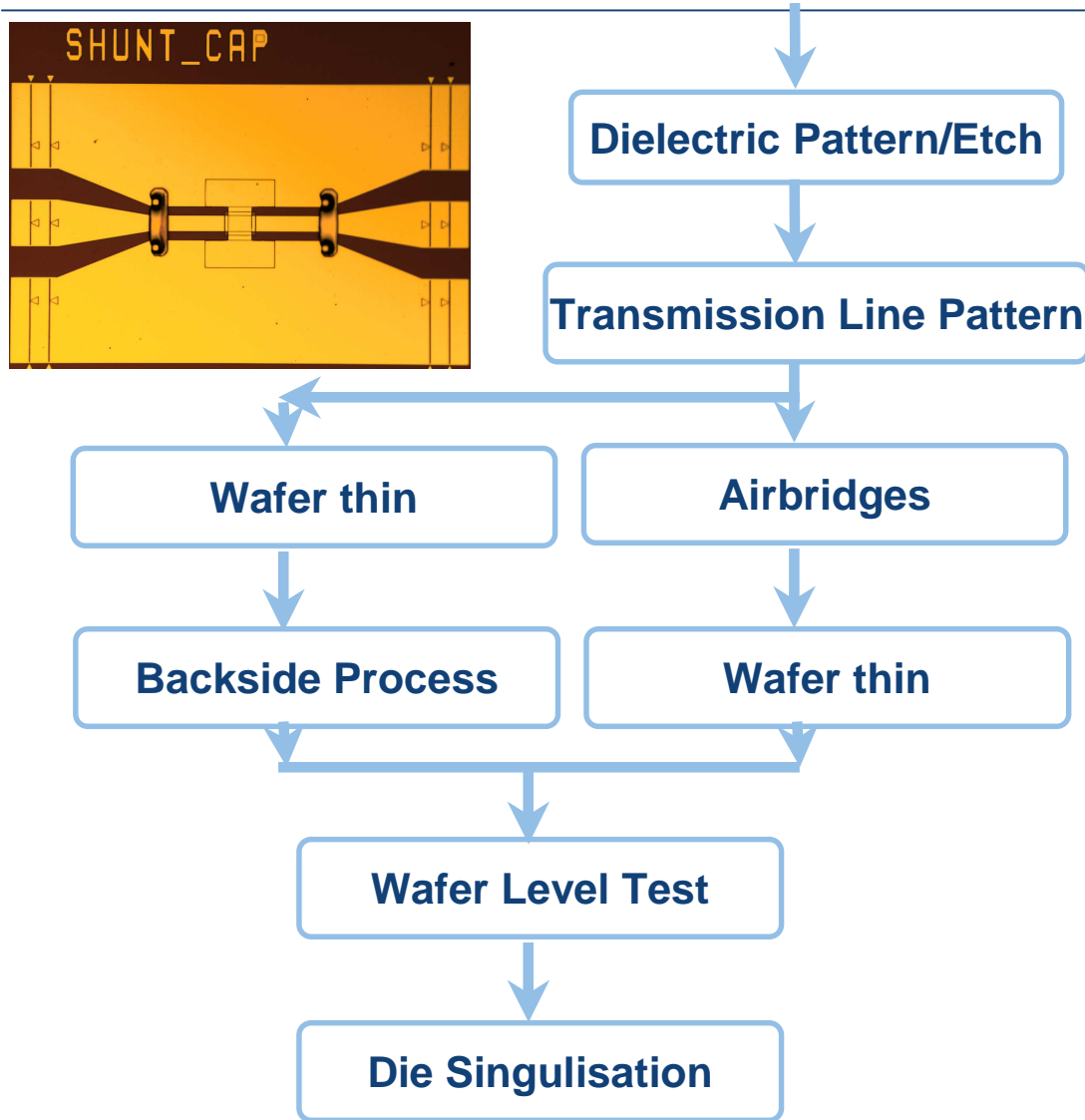
# Our Technology



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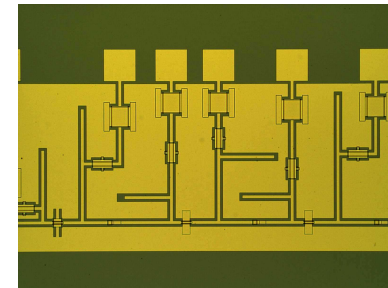
# Our Technology



# Our Current Products



- XanIC is developing a range of components with superior noise and gain performance targeted at high-frequency applications
  - Low noise amplifiers for receivers
  - Medium and high power amplifiers for transmit/receiver modules
  - Mixers, phase shifters, switches, fully integrated transceivers
- XanIC's first product is a 84-104 GHz low noise amplifier
  - target performance 21 dB gain, 2.9 dB noise figure
- XanIC is also working working with its customers and packaging partners on an integrated amplifier and detector module targeted the 94GHz imaging market
- XanIC's products will be available in a range of transmission line options:
  - Coplanar Waveguide
  - Microstrip
  - Conductor-backed Coplanar Waveguide



# Market Opportunities for XanIC



Frequency Range	Application	Status
23GHz, 38GHz	Cellular backhaul	Discussions with a potential partner
63-64GHz	Roadside telemetry, vehicle-to-vehicle comms	Potential in the long term
64-66GHz	Broadband point-to-point comms, specialist comms	Under review
E-band 71-76, 81-86 GHz	Broadband point-to-point	Under review
76-77GHz, 79GHz	Automotive radar	Potential in the long term
85-105GHz	Military radar, passive/active imaging for security applications	In advanced development Early sampling Q1/Q2 08
180-200GHz	Space, environmental monitoring, security imaging	In design/development
300GHz	Space, environmental monitoring, security imaging	Research

- **Glasgow University** – Research, Process Development, MMIC Design
- **Kelvin Nanotechnology** – access to GU fabrication facilities
- **Photonix** – Foundry services
- **MMIC Solutions** - Packaging



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