

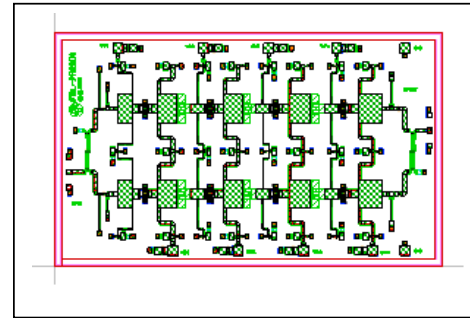
About Filtronic

- Filtronic was established in 1977 and currently has ~200 employees
- World leader in the design and manufacture of **a broad range of customised RF, microwave and millimetre-wave components and subsystems.**
- Two Business Units:
 - **Filtronic Broadband** designs and manufactures 60 to 90GHz millimetre-wave products for mobile broadband backhaul, defence applications as well as providing build to print manufacturing at its state of the art, highly automated facility in Sedgefield, Co Durham, UK
 - **Filtronic Wireless** designs and manufactures RF filters, combiners, TMAs, microwave subsystems and antennas for the mobile telecommunications industry, focusing on equipment for OEMs and network operators. HQ in Leeds with design centres in US and Sweden. Manufacturing is carried out in Suzhou, China
- Filtronic has demonstrated world class product quality and reliability, with over 500,000 transceiver modules and 700,000 filter products successfully deployed in the field, including over 20,000 mm-wave modules.

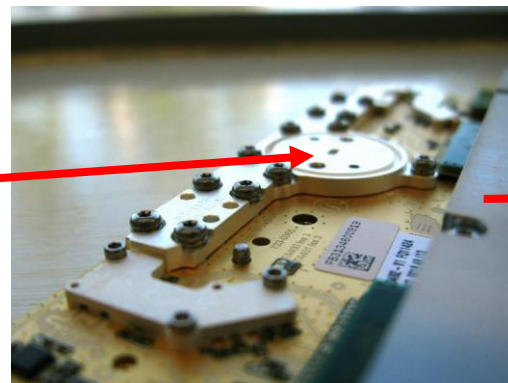
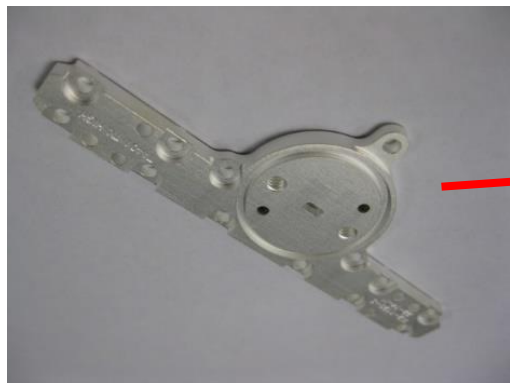
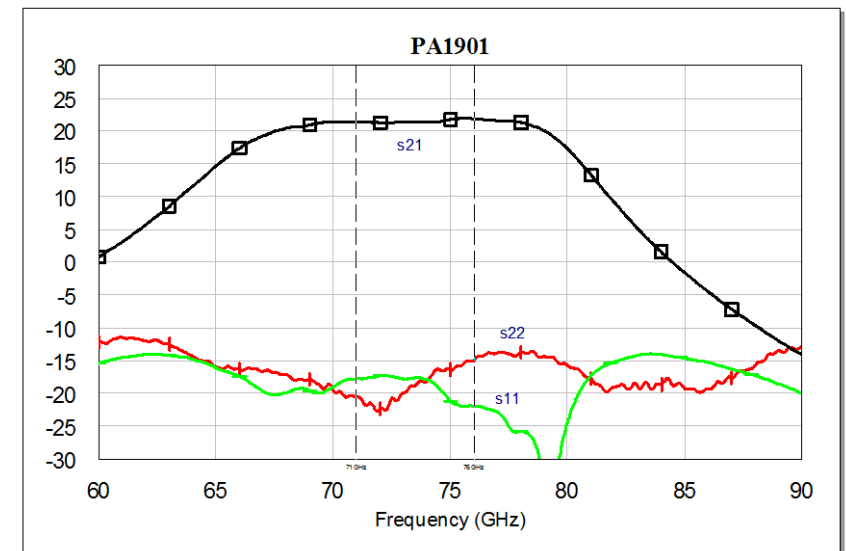
Design

Filtronic design

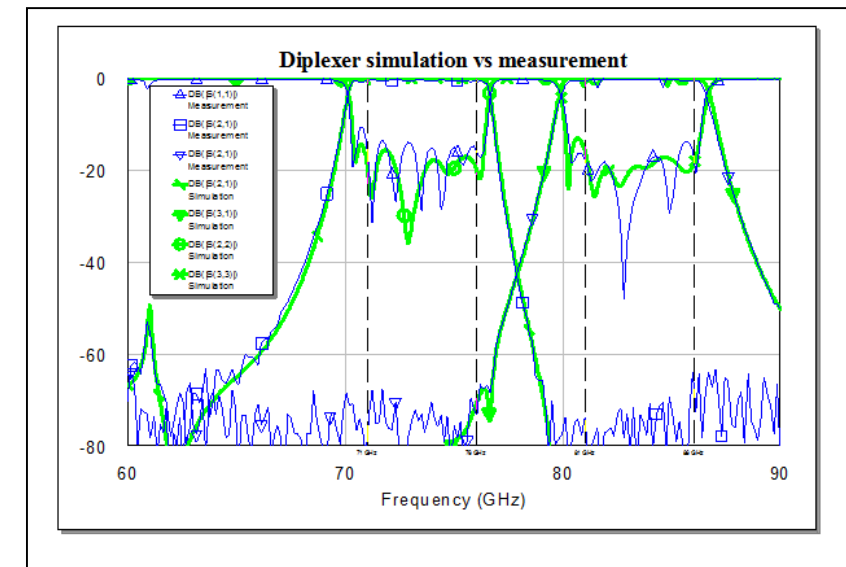
- MMICs where appropriate for the business
 - LNAs, mixers, modulators, VVAs, PAs, freq.multipliers
- filters
- mm-wave structures & microwave electronics
- control electronics
- waveguide elements (diplexers)
- hardware (housings)



Power Amplifier MMIC for 71-76GHz

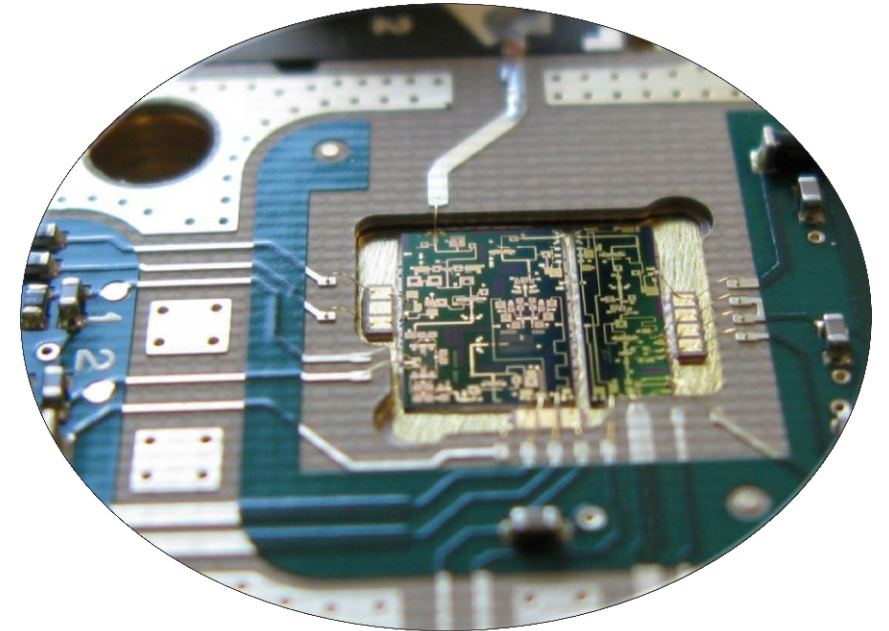
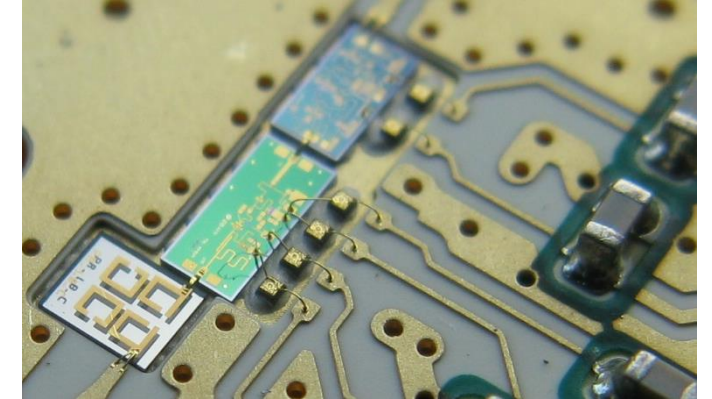


Integrated diplexer for FDD



Manufacturing Capability

- Proven track record designing, manufacturing and testing carrier grade mmW products – for multiple telecoms OEMs
- 20k mm Wave modules (75% E band) shipped to date making Filtronic largest independent mm-Wave transceiver manufacturer, in the World.
- Manufacturing clean rooms with multiple automated production lines
- Epoxy dispense
- Die & component placement
- Wire bonding
 - Auto
 - Manual
- Automated test to >90GHz
- Data management
- Supply chain management
- All manufacturing in line with MIL-STD-883
- ISO9001 certified



mm-Wave Test Solutions

High Investment in mm-Wave test equipment

High speed production test systems to 90GHz

- Automated measurement and calibration of Tx Power and Rx Gain
- Two tone IMD 3 on Tx and Rx
- Noise Figure
- Rx Gain
- Calibration for LO cancellation and sideband suppression
- Return Loss
- P1dB
- Gain Flatness
- All parameters can be tested over temperature.

On wafer test to 110GHz

- NF, IMD3, Power, s-parameters

