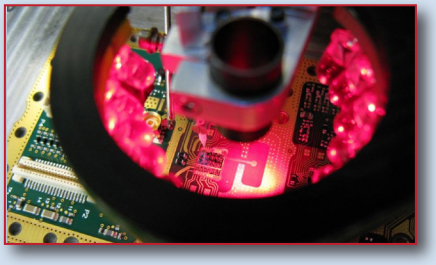
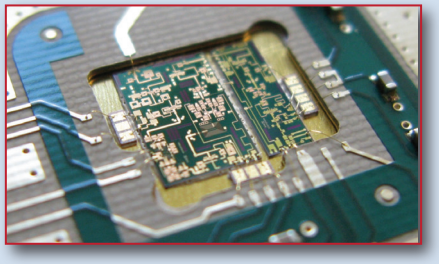
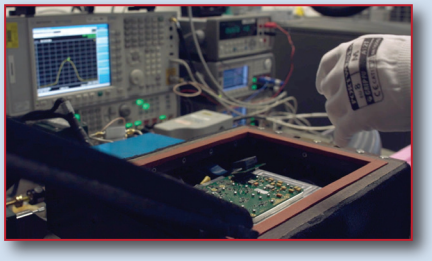
Filtronic Precision Hybrid Microelectronics Assembly and Test to 90 GHz







Having invested over U.S. $ 1.3 million in new equipment at the end of last year, and at the same time expanded its workforce, Filtronic has recently overseen a significant increase in the capacity of its manufacturing facility in Sedgefield, in the North-East of England. The 20,000-square-foot design and manufacturing center produces Filtronic's integrated E-Band transceiver modules in high volumes for mobile backhaul, products that are now seeing accelerating demand due to the roll-out of 5G globally. Over 500,000 transceiver modules and 700,000 filter products have been successfully deployed in the field. Of these, more than 40,000 have been E-band modules, including the company's flagship Orpheus and Morpheus II transceivers.

Filtronic is also seeing a significant increase in demand for its custom design and microelectronics assembly services, particularly at microwave and mmWave frequencies. These services enable clients around the world to commission their own product designs to be prototyped and manufactured in an automated factory in the U.K., with a world-class reputation for product quality and reliability.

The company's expertise has been accumulated during a heritage spanning more than four decades since it was first founded in 1977. Filtronic fosters a culture with a commitment to quality supported by Six Sigma, high levels of production automation, strict traceability and adherence to military standards. The Filtronic team is highly qualified, experienced and enjoys enviable levels of retention with an average length of service of over 14 years. Filtronic's aim is to provide a unique path to a low-risk, secure service to make products for applications including point-to-point radio links, phased array radars and security applications such as imaging.

The manufacturing and test area at Sedgefield includes 2,500 square feet of Class 100,000 clean rooms, and another 2,500 square feet of engineering development labs. Its production capability includes microwave and mmWave device packaging, sub-assembly manufacturing and test, specializing in mmWave projects up to 90 GHz and beyond. Filtronic also offers design services to fit customer's needs. The company's expertise is taking a project from concept to implementation. In all cases, from rapid prototyping to volume production, the appropriate design expertise and production engineering advice is readily available.

Filtronic's hybrid microelectronics assembly and test portfolio includes low-void die attach and precision component placement; fully automated wire and ribbon bonding with deep-access multi-level capability; skilled manual assembly; hermetic sealing; and automated test to 90 GHz. Proprietary air cavity packages can include mixed GaAs, GaN and Si die within a single package, and can perform at frequencies higher than 90 GHz. Particular attention is given to optimizing die attachment and heatsinking for power devices, and in minimizing wire-bond parasitics for products that operate at higher frequencies.

The precision hybrid microelectronics assembly facility has received significant positive feedback from its clients, including a major European defense manufacturer who singled out Filtronic's manufacturing expertise for a special commendation. The award cites Filtronic's effort and commitment in successfully delivering a large production run of transmit/receive modules as providing an "outstanding contribution" to its state-of-the-art radar system.

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