

24 May 2017

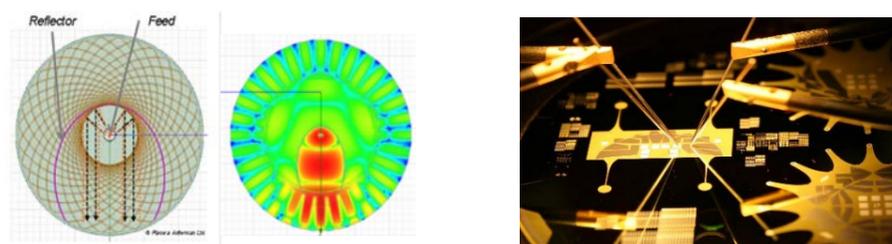
Why Plasma Silicon is the last link in the 5G chain.... And the first!

We know that 5G URLLC at mmWave frequencies require fast formed and steered beams. Only antennas based on Plasma Silicon Devices (PSiD) provide the low loss and power handling to deliver the range at an affordable price. PSiD's not only require less silicon to do the same job as Phased Arrays but also simplify the whole system design providing a secondary set of significant cost savings by their use.



PSiD technology delivers very high throughput, low latency, directional beams so generating less interference and maximising energy efficiency. PSiD's also have high RF power handling increasing the range of beams.

For consumers the rapid beam steering (as little as 500 nanoseconds per transition) provides real time tracking to maintain optimum connectivity or, if needed, a reorganisation of the signal path. In backhaul or point to point/multi point applications the network can reorganise, rehome without humans having to physically adjust or align the antenna. Furthermore, the antennas will maintain perfect alignment for maximum efficiency in high wind/vibration scenarios minimising the long term cost of ownership.



Applications for PSiD technology are many, 5G base stations, smart phones, tablets and PC, but also games consoles, Virtual and Augmented reality headsets and other wearable tech. As 3D, tactile and holographic displays develop devices will need wireless gigabit connectivity and sub millisecond latency to deliver the experience consumers will demand. For satellite and airborne comms PSiD's offer a wide field of view, low profile and can track satellites, or each end of an air to ground link with no moving parts. Up at 77GHz PSiD's can be used as scanning radar for autonomous vehicles, as well as providing connectivity to the passengers at 5G frequencies.

In short Plasma Silicon technology addresses the challenges of millimetre wave communications while also delivering the low cost and low power consumption of a single monolithic silicon chip. It's the last link between the 5G mmWave network and the subscriber and the first link from the subscriber to the 5G mmWave network.

Interested? If you'd like to learn more about Plasma Antennas and our ground-breaking technology get in touch on info@plasmaantennas.com