Broadband Proximity Coupled Microstrip Planar Antenna Array for 5G Cellular Applications
ABSTRACT

A novel low-cost, high-gain mmWave antenna has been presented. The antenna is a 6 x 5 proximity-coupled planar array suitable for 5G cellular applications. Good agreement between simulated and measured results achieved shows that the proposed antenna structure is efficient in achieving broadband characteristics and low sidelobe levels with a compact size. The antenna has a gain of 21 dBi over a bandwidth of 27.5 GHz to 28.5 GHz. It also exhibits an impedance bandwidth of 9.8% from 26.04 GHz – 28.78 GHz.
EXISTING SYSTEM

• A novel linear structure is proposed which has both the bandwidth capabilities of a coupled antenna and a series configuration as that of a direct-feed antenna.

• The antenna has a simple structure which permits the easy formation of tightly spaced planar and phased arrays with a coupled-feed structure which in general is quite difficult to design.
PROPOSED SYSTEM

• In this paper, a 6 x 5 array is formed to verify the simplicity of the planar array formation capabilities of the antenna in while achieving a gain.

• The proposed planar array has a bandwidth of 9.8% and demonstrates a way of forming proximity coupled microstrip planar arrays without the use of cumbersome corporate feeding networks with the ability to easily form any planar configuration desired.

• This is very useful in applications where compact size is a major requirement. This can also be extended for aperture coupled structures as well.
SYSTEM REQUIREMENTS

HARDWARE REQUIREMENTS:

· Processor - intel core i3
· RAM - 2GB
· Hard Disk - 20 GB

SOFTWARE REQUIREMENTS:

· Ansoft HFSS(High Frequency Structure Stimulator)
REFERENCE


