

**Abstract:**

Performance of a novel integratable broadband antenna employing inverted microstrip circular patch (IMCP) is presented based on the simulation and experimental studies. The antenna geometry embodies dual stacked patches printed back to back on a single substrate in inverted microstrip configuration. Unlike previous designs, the present stacked patch offers easy integration of active devices with large bandwidth without any enhancement in weight, volume or cost. The design is built up in steps through optimizing the antenna parameters using HFSS full wave solver and are verified experimentally showing close agreement between them. Nearly 15%  $SWR < 2$  bandwidth has been reported. Over 90 % radiation efficiency with 7dBi gain are evident from the simulation data. Principal plane radiation patterns are examined using numerical and experimental data revealing its suitability for mobile communication equipment.