Abstract

This paper presents design and fabrication equilateral triangular parasitic patch microstrip antenna array with operating frequency at 2.42 GHz, for wireless communication systems. The Industry, Scientific and Medical (ISM) Band, unlicensed with the range 2.40 - 2.4835 GHz is used as the operation band. The maximum bandwidth can be achieved by controlling the
distance between the patch antennas and by adjusting the probe feed position. Return loss of -33.23 dB with VSWR 1.10 at 2.42 GHz. The results show that the proposed antenna has the impedance bandwidth of 120MHz for the array without triangular slot and 140MHz with triangular slot loaded ETMA planar array. The antenna parameters are investigated and optimization is performed by varying the feed position and substrate dielectric constant. The input and radiation characteristics are examined and compared. The various parameters are measured and practical results are presented and discussed.

Reference


Index Terms

Computer Science

Wireless Communications
Key words
Array parasitic patch multi-resonator
ETMA
VSWR
VNA