









**Figure 9:** Efficiency Vs frequency of proposed microstrip antenna

**Table 2:** Simulated Data

Resonance Frequency	4.449 GHz
Gain	4.19692dB
Directivity	4.4919dB
Bandwidth	67.25%
Frequency Range	2.38 GHz - 4.79 GHz
Return Loss	-24.19dB
VSWR	1.132
Radiation efficiency	84.1316%
Antenna efficiency	83.657%

#### 4. Conclusion

In this analysis, a new design of linearly polarized trapezium shaped microstrip patch antenna with T-slots designed for wireless application and result shows the achievement of a wide impedance bandwidth of **67.25%** at **-10 dB** return loss, in the frequency range **2.38GHz – 4.79GHz**. In my design, the antenna is fed by co-axial probe feed of  $50 \Omega$  at point (5, 5). So I have achieved enhanced bandwidth of **67.25%**, efficiency of %, gain of dBi, directivity of dBi as shown in figure 3, 7, 8 and 9 respectively.

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