

(54) Title of the invention : A KIND OF RECTANGULAR PATCH ANTENNA USING MULTI-RESONANT SLOTS FOR BANDWIDTH IMPROVEMENT

<p>(51) International classification</p> <p>(31) Priority Document No</p> <p>(32) Priority Date</p> <p>(33) Name of priority country</p> <p>(86) International Application No Filing Date</p> <p>(87) International Publication No</p> <p>(61) Patent of Addition to Application Number Filing Date</p> <p>(62) Divisional to Application Number Filing Date</p>	<p>:H01Q0009040000, H01Q0001380000, H01Q0001500000, H01Q0001480000, H01Q0005500000</p> <p>:NA</p> <p>:NA</p> <p>:NA</p> <p>:NA</p> <p>:NA</p> <p>: NA</p> <p>:NA</p> <p>:NA</p> <p>:NA</p> <p>:NA</p>	<p>(71)Name of Applicant :</p> <p>1)BOLLAVATHI LOKESHWAR, RVRJCCE Address of Applicant :Assistant Professor, Department of ECE, R.V.R. & J.C. College of Engineering, Chowdavaram, Guntur, Andhra Pradesh India-522019 Andhra Pradesh India</p> <p>2)Mr.RAMESH DESHPADE, BVRIT</p> <p>3)Mrs. LANKA PADMALATHA, GEC</p> <p>4)Mrs. MADHAVI DEVI LANKA, PVPSIT</p> <p>5)Dr. E. GNANAMANO HARAN, ANNAMALAI UNIVERSITY</p> <p>6)Mrs. T. NIRMALA, SPMVV</p> <p>(72)Name of Inventor :</p> <p>1)BOLLAVATHI LOKESHWAR, RVRJCCE</p> <p>2)Mr.RAMESH DESHPADE, BVRIT</p> <p>3)Mrs. LANKA PADMALATHA, GEC</p> <p>4)Mrs. MADHAVI DEVI LANKA, PVPSIT</p> <p>5)Dr. E. GNANAMANO HARAN, ANNAMALAI UNIVERSITY</p> <p>6)Mrs. T. NIRMALA, SPMVV</p>
--	---	--

(57) Abstract :

The present invention discloses a kind of rectangular patch antenna using multi-resonant slots for bandwidth improvement 100. A rectangular patch 102 loaded with U-shaped slot 103 and defected ground structure are attached to top and bottom surfaces of the dielectric substrate 101, respectively. U-slot consists of two parallel vertical rectangular slots and a horizontal rectangular slot. To improve the impedance matching, a simple transformed unit 105 is placed between the microstrip line 104 and feed point. Ansoft HFSS software is used to design and simulate the proposed antenna, which exhibits multi-resonant characteristics with the inclusion of several structures which are termed as multi-resonant structures. The notch band of 5.26 GHz (impedance bandwidth of 0.8 GHz) is observed by introducing U-slot 103 and the corresponding gain is 4.587 dB at 7 GHz. The notch band antenna eliminates the interference caused by WLAN systems.

No. of Pages : 15 No. of Claims : 8