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(57) Abstract :
The present disclosure relates to an antenna device (100) for wireless communication, the device including a rectangular slotted patch (102) configured on a substrate, at least two E-shaped stubs (104) embedded on any or a combination of left side and right side of the rectangular slotted patch, an inverted T-shaped stub (106) having at least two horizontal strips folded on both sides is embedded in an upper edge of the rectangular slotted patch. A feed line (108) is employed at backside of the substrate, one or more patches of different size is added to form a combination of staircase shaped feed line, the feed line operable to excite the antenna device, wherein upon excitation, the at least two E-shaped stubs and the inverted T-shaped stub generate a plurality of frequency bands with enhanced impedance bandwidth for communication.

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