

This paper presents a novel ultra-wideband (UWB) monopole antenna with dual band-notch characteristics. The proposed antenna consists of a V-shaped patch with a stair case defect fed by a 50  $\Omega$  transmission line and a semicircular defected ground plane. It is designed for rejection of dual frequency bands, that is, WiMAX (3.17– 3.85 GHz) and ITU (7.9–9.1 GHz). The 2 bands are achieved by using 2 parasitic stubs that are inserted on the patch, and an inverted U-shaped slot that is etched on the transmission line, respectively. The antenna has a nearly omnidirectional radiation pattern with an acceptable gain across the operating frequency band. A good agreement between the simulated and measured results indicates that the proposed UWB antenna design with overall size of 23.32 mm<sup>2</sup> is suitable for WiMAX/ITU dual band-notch applications