

ABSTRACT:

An innovative technique involving the usage of a mushroom Electromagnetic Band Gap (mEBG) structure with an ultra wideband (UWB) antenna is reported in this work. A single unit of mEBG lattice is incorporated within a novel UWB antenna to perform the band rejection operation. The antenna can be fixed to reject or reduce the transmit power for any band within the UWB spectrums of frequencies through a careful design of this mEBG structure, thus solving the problems concerning interference and reducing the requirements for complex filtering electronics within the UWB devices.