ABSTRACT

Radio Frequency Identification (RFID) is a technology identification using radio waves . This technology is able to identify objects without direct contact with a considerable distance . RFID offers advantages over manual system or use of bar code (barcode) . RFID technology can be used as a refinement of barcode technology that limited visibility . Labels can be read if passed near the reader label , even if the reader is covered by objects or invisible . An RFID tag can be affixed to an object and used to track and manage inventory , assets , people , and others. There are two components that are required in the RFID tag and reader antennas .

The antenna is designed to be flexible passive tag antennas with UHF frequency band . Substrate material used is polycarbonate (plastic) to support the flexible antenna obtained by using a printing process Sputtering method . On Sputtering process , a process of firing the coating material (target) with high-energy ions resulting in the exchange of momentum . Atoms of the target will be detached and attached to the substrate . Such methods may gain a stronger bond to the material .

In the design of a flexible tag antenna is obtained with the following results : VSWR =1,6 , the operating frequency is 915 MHz UHF band , radiation pattern bidirectional .
Keywords : RFID , Antenna Tags , Polycarbonate , Sputtering