

UHF RFID METAL TAG APPLYING TO LICENSE PLATE USING METAL SHIELDING AND WATERTIGHT METHODS

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Abstract: This paper describes a design for RFID (Radio Frequency Identification) tag using license plate attached the vehicle bumper in 900 MHz band. The implemented metal tag for a license plate is applied metal shielding method, watertight method of RFID tag, and metal corrosion protection method using silk screen technique. Moreover, its range of the fabricated tag antenna that the license plate and the vehicle bumper were fixed by bolt and nut was observed 8.2 m. This measured readable range showed about 5 m above far distance more than the average readable range of commercial tag antenna. The RFID have ability of 0.5 seconds of recognition speed in the evaluation of performance. The tag for license plate will be able to provide to the custom administrator and goods manager in various telemetries services.

Index Terms: Metal Tag, UHF RFID, Metal Shielding, Corrosion Protection, Watertight Method