VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama" Belagavi – 590010

PROJECT REPORT ON

"DESIGN AND SIMULATION OF RF MEMS SWITCH USING MICRO ACTUATORS AND CAPACITORS"

Submitted in partial fulfillment of the requirements for the award of degree

BACHELOR OF ENGINEERING
IN
ELECTRONICS & COMMUNICATION ENGINEERING

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ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

MOODBIDRI – 574 225. 2019-2020

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(Affiliated to VTU, **BELAGAVI**)

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

CERTIFICATE

*Certified that the project work entitled "***DESIGN AND SIMULATION OF RF MEMS SWITCH USING MICRO ACTUATOR AND CAPACITOR***" is a bona fide work carried out by*

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in partial fulfillment for the award of BACHELOR OF ENGINEERING in **ELECTRONICS & COMMUNICATION ENGINEERING** of the **VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI** during the year 2019–2020. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project work prescribed for the Bachelor of Engineering Degree.

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ABSTRACT

Miniaturized scale Electro Mechanical System (MEMS) is an innovation of micrometer-scale gadgets. MEMS is a blend of actuators, sensors, mechanical components and hardware on a typical substrate utilizing IC process arrangements and these are utilized in various applications, for example it can be used in sensor frameworks and optical systems. MEMS are exceptionally alluring for various applications on account of their size and weight. The size of the MEMS ranges from micrometers to millimeters. The RF MEMS switches are the particular smaller scale mechanical switches that are intended to work at RF to mm wave frequencies. MEMS switches are utilized in some mechanical development to accomplish a shut or open circuit in the Radio Frequency transmission lines.

This paper proposes a system that will help for the further innovation system in electronics for communication and also in many other application where size of the component matter by reducing size and increasing the performance helps in many ways. In this system by finding the displacement and capacitance for different voltages where by using conventional method we cannot change the voltages but in this it can be set to better voltage and other parameter it will be helpful for lower consumption, durability and so on.

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