

ENHANCED VOLTAGE DOUBLER CIRCUIT USING IC555 TIMER: DESIGN AND APPLICATION



ECB1204 - ANALOG INTEGRATED CIRCUIT

A PROJECT REPORT

Submitted by

SHAKTHIVISESH N

THANISHKUMAR K

VISHAL A

in partial fulfillment for the award of the degree

of

BACHELOR OF ENGINEERING

in

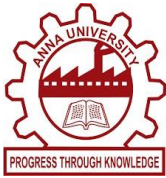
ELECTRONICS AND COMMUNICATION ENGINEERING

K. RAMAKRISHNAN COLLEGE OF TECHNOLOGY

(An Autonomous Institution, Affiliated to Anna University Chennai and Approved by AICTE, New Delhi)

SAMAYAPURAM, TIRUCHIRAPPALLI – 621 112

DECEMBER, 2024



ENHANCED VOLTAGE DOUBLER CIRCUIT USING IC555 TIMER: DESIGN AND APPLICATION



ECB1204 - ANALOG INTEGRATED CIRCUIT

A PROJECT REPORT

Submitted by

**SHAKTHIVISESH N
THANISHKUMAR K
VISHAL A**

in partial fulfillment for the award of the degree

of

BACHELOR OF ENGINEERING

in

ELECTRONICS AND COMMUNICATION ENGINEERING

K. RAMAKRISHNAN COLLEGE OF TECHNOLOGY

(An Autonomous Institution, Affiliated to Anna University Chennai and Approved by AICTE, New Delhi)

SAMAYAPURAM, TIRUCHIRAPPALLI – 621 112

DECEMBER, 2024

**K. RAMAKRISHNAN COLLEGE OF TECHNOLOGY
(AUTONOMOUS)**

SAMAYAPURAM, TIRUCHIRAPPALLI- 621 112

BONAFIDE CERTIFICATE

Certified that this project report titled “**ENHANCED VOLTAGE DOUBLER CIRCUIT USING IC555 TIMER: DESIGN AND APPLICATION**” is the bonafide work of **SHAKTHIVISESH N (2303811710621100)**, **THANISHKUMAR K (2303811710621112)**, **VISHAL A (2303811710621124)** who carried out the project under my supervision. Certified further, that to the best of my knowledge the work reported herein does not form part of any other project report or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

SIGNATURE

Dr. S. SYEDAKBAR, M.E., Ph.D.,

HEAD OF THE DEPARTMENT

Assistant Professor

Department of Electronics and
Communication Engineering

K Ramakrishnan College of Technology
(Autonomous)

Samayapuram – 621 112

SIGNATURE

Mrs. G. KEERTHANA, M.E.,

SUPERVISOR

Assistant Professor

Department of Electronics and
Communication Engineering

K Ramakrishnan College of Technology
(Autonomous)

Samayapuram – 621 112

Submitted for the viva-voce examination held on

INTERNAL EXAMINER

EXTERNAL EXAMINER

DECLARATION

We jointly declare that the project report on “**ENHANCED VOLTAGE DOUBLER CIRCUIT USING IC555 TIMER: DESIGN AND APPLICATION**” is the result of original work done by us and best of our knowledge, similar work has not been submitted to “ANNA UNIVERSITY CHENNAI” for the requirement of Degree of BACHELOR OF ENGINEERING. This project report is submitted on the partial fulfillment of the requirement of the award of Degree of BACHELOR OF ENGINEERING.

Signature

SHAKTHIVISESH N

THANISHKUMAR K

VISHAL A

Place : Samayapuram

Date :

ACKNOWLEDGEMENT

It is with great pride that we express our gratitude and in-debt to our institution “**K. Ramakrishnan College of Technology (Autonomous)**”, for providing us with the opportunity to do this project.

We are glad to credit honorable and admirable chairman **Dr.K.RAMAKRISHNAN, B.E.**, for having provided the facilities during the course of our study in college.

We would like to express our sincere thanks to our beloved Executive Director **Dr. S. KUPPUSAMY, MBA, Ph.D.**, for forwarding our project and offering adequate duration in completing our project.

We would like to thank **Dr. N. VASUDEVAN, M.Tech., Ph.D.**, Principal, who gave opportunity to frame the project with full satisfaction.

We whole heartedly thank **Dr. S. SYEDAKBAR, M.E., Ph.D.**, Head of the Department, Department of Electronics and Communication Engineering for providing his encouragement in pursuing this project.

We express our deep and sincere gratitude to our project guide, **Mrs.G.KEERTHANA, M.E.**, Assistant Professor, Department of Electronics and Communication Engineering, for her incalculable suggestions, creativity, assistance and patience which motivated us to carry out this project.

We wish to express my special thanks to the officials and Lab Technicians of our departments.

TABLE OF CONTENTS

CHAPTER NO.	TITLE	PAGE NO.
1	PROBLEM STATEMENT	1
	1.1 BACKGROUND OF THE WORK	2
2	DESIGN PROCEDURE VOLTAGE DOUBLER	3
	2.1 COMPONENTS USED	3
	2.1.1 555 TIMER IC	3
	2.1.2 DIODE	4
	2.1.3 33 K Ω RESISTORS	4
	2.1.4 470 μ F CAPACITOR	5
	2.1.5 10 μ F CAPACITOR	5
	2.1.6 9V BATTERY	6
	2.1.7 12V LED	6
	2.2 WORKING PRINCIPLE OF VOLTAGE DOUBLER	7
3	COST OF THE COMPONENTS	8
4	RESULT AND DISCUSSION	9
	4.1 FUNCTIONALITY	9
	4.2 ADVANTAGES	9
	4.3 LIMITATIONS	10
	4.4 APPLICATIONS	10