

CHAPTER 5

CONCLUSION AND SCOPE FOR FUTURE WORK

5.1 INTRODUCTION

In the present dissertation some studies have been carried out on OTA-C oscillators.

In the first chapter general introductions and description of various types of signal generations circuits (both sinusoidal as well as non- sinusoidal) has been presented. A detailed review of sinusoidal oscillators realised with different active elements has also been given.

In the second chapter a detailed review of operational transconductance amplifier (OTA) based signal processing circuits has been given. The chapter reviews various aspects of OTA based signal processing circuits.

In the third chapter a systematic review of some of the important works done by various researchers on OTA based sinusoidal oscillators has been presented. A detailed review the work carried out by Bhasker, Senani and Tripathi [Ref. 1 , ch. 4] for generating 2-capacitors, 3-OTA based variable frequency oscillators has been done. Some experimental results on previously published oscillator circuits have also been presented.

In the fourth chapter the methodology proposed by Bhasker, Senani and Tripathi [Ref. 1 , ch. 4] has been used to examine the possibility of existence of 4-OTA, 2-capacitors based variable frequency oscillators. A catalog of 23 such oscillators has been presented. Some of experimental results for some of these oscillators circuits have been presented.

5.2 SCOPE FOR FURTHER WORK:

OTA-C oscillators have assumed more importance in the recent past from the point of view of their CMOS realization. The CMOS OTA-C oscillators have better high frequency operation and operate with lower bias voltages. CMOS version of the oscillators presented in chapter 4 may be developed as a separate problem.