

**A
Dissertation
on
CASE STUDY OF MEMRISTANCE BASED
CHUA'S CIRCUIT**

Submitted in partial fulfilment of the requirement
For the award of Degree of

**MASTER OF ENGINEERING
(Control & Instrumentation Engineering)**

By
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CERTIFICATE

This is to certify that major thesis titled “**Case study of Memristance based Chua’s circuit**” submitted by, **Ms. Shruti Sharma** in partial fulfillment for the degree of Master of Engineering (CONTROL AND INSTRUMENTATION) of Electrical Engineering Department, **Delhi College of Engineering**, is a bonafide record of work carried out by her under my guidance and supervision.

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ABSTRACT

This Project report highlights the V-I characteristics analysis of various implementations of chua diode by plotting the characteristics at different values of breakpoints and slopes. The V-I characteristics are obtained by simulating the different implementations of chua circuit by matlab simulink software.

In the next section, a case study is performed on memristance driven chua's circuit. Some parameters are selected by studying the desired conditions of memristor attractor and then two cases are implemented to obtain the memristor attractors. In First case the attractors pattern obtained confirms the presence of chaos on incorporating amemristor in place of chua diode while the second case gives us the desired attractors that can be used in various applications of secure communications.

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