12-14-1984

An Investigation Into Frequency Stabilization As Temperature Variations Occur

Mark A. Pizzuto
Indiana University - Purdue University Fort Wayne

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<u>TITLE</u>

An Investigation into Frequency Stabilization as
Temperature Variations Occur

<u>Prepared For</u>

The Electrical Engineering Technology Staff
Professors Nold, Emery, Detraz, Gates, Gideon, Nordlin

<u>Submitted By</u>

Mark A. Pizzuto
Senior - Electrical Engineering Technology
Date: December 14, 1984

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LIST OF ILLUSTRATIONS

ABSTRACT
of
An Investigation into Frequency Stabilization as
Temperature Variations Occur
By
Mark A. Pizzuto

This report presents the documentation gathered con-
cerning the above title. It takes an in depth look into
crystal oscillator design and performance using an ex-
perimental method of design. The purpose of this inves-
tigation was to establish a means by which to rectify
frequency drift as temperature variations occured.
With the introduction of an 8080 based microprocessor,
correction values were stored in memory while a compar-
ator program constantly ran. This technique proved to
be applicable in establishing any type of compensation.
Along with the description of this technique, a copy of
the software is enclosed as well.