CONTENTS AND ABSTRACTS

DATA TRANSMISSION AND PROCESSING

RADIOTECHNICAL AND MEASURING SYSTEMS

Key words: SAW-based pressure (force) gauge, disk strain gauge, mechanical stress, oscillator frequency, ST - cut of quartz.

The way to calculate the deflected mode of a disk in the field of interdigital transducer of surface acoustic waves (SAW) arrangement when compressed by two equal diametrical forces is offered. Expressions for normal and shear mechanical strain, settlement loading scheme disk strain gauge with interdigital transducer of SAW, a graph to distribute mechanical stress in a disk at compression along diameter and findings of experimental investigations of SAW delay lines tensosensitivity are resulted

COMPUTER SCIENCE AND APPLIED MATHEMATICS

Key words: artificial neural networks, information form converters, neurons-converters, functional models, neural basis of operations.

Article considers main approaches and techniques combined in the methodology to construct functional models of neurons-converters as important elements in the description of ANN-converters. Examples to develop «code – frequency» and «frequency – code» neuron-converter functional models are given

Key words: adaptive accelerated routing, IGRP protocol, dynamic changes, routing algorithms, corporate networks.

Adaptive accelerated routing algorithm based on IGRP protocol during dynamic corporate network nodes and communication links failure which increases the quality of its operation is offered

Key words: conversion function, chain-structure, frequency, load resistance, sensitivity.

In this paper applying conversion functions method an impact of elements parameters changes as digital-to-analog converters output voltage sensitivity and quasi-resonance frequency of phasing RC-oscillators chains is investigated. The analytical expressions are being obtained and the dependences of output oscillator frequency on the change of load resistance value are being built

ELECTRONICS

Key words: closing of magnetically operated contacts, magnetic resistance, movement of contact parts, current of operating coil.

A computer model of reed switch closing process in a chain with active loading is developed. The model was tested in application to MKA-14108 reed switch for current of 0.1 A and voltage of 100 V. Time dependence of contact details coordinates, magnetic, elastic and electric forces influencing the detail, and parameters of magnetic and electric circuits are obtained. It was established that a relatively large (about 10 μJ) energy with bounce details to the positive