ZTP Thermal & Power

Pin tube as an adjustable attenuator

Overview

The PIN tube has the characteristics of low on-resistance, high off-resistance, and small capacitance between electrodes. So generally it can be used as SWITCH, and the design of adjustable attenuator; Manufacturers such as skyworks, Rohm, and nxp all sell PIN tubes. ttenuator with a low impedance driver circuit to significantly decrea the rise and fall times. At high frequencies, the lowering of attenuation- (at consta t bias) is primarily due to capaci frequency high attenuation operation.

Pin tube as an adjustable attenuator

A Wideband General Purpose PIN Diode Attenuator

Introduction PIN diode-based Automatic Gain Control (AGC) attenuators are commonly used in many broadband system applications such as cable or fiberoptic TV, wireless CDMA, etc. A popular

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Attenuator Circuit Designs: Passive to Programmable

Key Takeaways Passive attenuators use resistor networks for signal reduction without power, while active attenuators can include components like MOSFETs and PIN diodes for

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PIN Diode RF Switch and Attenuator Design

Explore PIN diode characteristics and circuit designs for RF switches and attenuators. Learn how PIN diodes are used to control RF power in microwave

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Design of PIN diode controlled variable attenuator using

The design and analysis of a novel variable attenuator employing a 0-dB branch-line directional coupler featuring slow-wave microstrip lines is presented. This design

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RF Demystified: What is an RF Attenuator?

Types of Attenuators From the key functional perspective, attenuators can be classified as fixed attenuators with an unchanging level of attenuation and

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How to Build a Simple Attenuator Circuit

Power Source Jumper wires For this circuit, we can use a resistor or potentiometer to act as the attenuator. A resistor will act as a fixed attenuator, while a

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Partialized Continuous-Variable Pin Diode Attenuator

By Giovanni Bianchi and Marco Garbati. A novel broadband continuous-variable attenuator is presented. Compared with the standard solution, the proposed structure improves precision and linearity,

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Voltage-Controlled Tunable Filtering Attenuator Using PIN

Diodes

In this brief, a voltage-controlled tunable filtering attenuator using PIN diodes is proposed. A coupled-line structure loaded by PIN diodes is utilized to realize the integration of filtering and attenuation.

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A Wideband General Purpose PIN Diode Attenuator

A popular attenuator design used over the instantaneous frequency range from 10 MHz to beyond 2 GHz is the PI network. The benefit of this design is its broadband constant impedance, wide dynamic

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X-band voltage variable attenuators using PIN diodes

We present the design of PIN diode based medium-power Voltage Variable Attenuators realized on microstrip in the frequency range of 9.1-9.6 GHz. These reflective variable attenuators have a

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Attenuators

Ray Waugh's PIN diode attenuator Gain equalizers Parabolic equalizers Parabolic equalizer example 2 (new for April 2022) Introduction to attenuators Attenuators

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PIN Diode Variable RF Attenuator Circuit Design

Explore the design and functionality of PIN diode-based variable RF attenuator circuits, including single and four-diode configurations, and their key applications.

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Partialized Continuous-Variable Pin Diode Attenuator

RF elements (black) bias elements (green), optimizing RF elements (blue), partializing RF element (red). Figure 1B shows a possible implementation of a continuous variable attenuator based on the ?

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Current-Source DAC with PIN Diode Provides RF Attenuation and

PIN diodes are often used as variable attenuators for RF signals in TV tuners, and for wideband RF in fixed equipment. These diodes can be mounted as discrete devices on a board, or

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Attenuators

A PIN diode attenuator is a type of variable attenuator that uses a PIN diode as the primary component. The diode is used to control the amount of RF (radio frequency) power that is passed through the

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Current-Source DAC with PIN Diode Provides RF Attenuation and

This application note details several methods used to control RF attenuation using a PIN diode, as well as a current-source DAC. PIN diodes are often used as variable attenuators for RF

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ATTENUATOR BASED ON PIN DIODE , Download

This paper presents a startup control method for plasma lamps by using an integrated fractional-N phase-locked loop (PLL) as the RF signal source.

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(PDF) Diode quad is foundation for PIN diode attenuator

[Devices & ICs] Diode Quad Is Foundation For PIN Diode Attenuator A low -cost surface-mount PIN diode quad was used as the basis for two versions

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High power variable attenuator with PIN diodes

A concept and design of a high power attenuator for the X-band have been presented. The attenuation is controlled by two PIN diodes. A circuit is based on a ring coupler and it is configured as a reflective

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What is an RF Attenuator

Typical PIN diode switched / programmable RF attenuator They are also widely used within switched attenuators where the PIN diodes enable the different elements to

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Passive Attenuator Tutorial and Resistive Attenuator

Passive Attenuator Circuit Designs The Passive Attenuator is a purely resistive network that is used to weaken or "attenuate" a signal level without using an

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Easy DIY Guitar Attenuator Build For Your Tube Amp

Easy DIY Guitar Attenuator Build For Your Tube Amp Easy DIY Guitar Attenuator Build For Your Tube Amp. We are using an Lpad in this build which is a passive

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Uneeda Audio

Build your own attenuator pads All of these texts deal with the subject from the classic

matched-impedance standpoint; where the line is driven from a

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Design of RF Attenuator Based on PIN Diode

We can design a attenuator which attenuation can be continuously tunable by three PIN diodes which replace R1 and R2 in Fig.1. The circuit will be asymmetric if R1 and R2 are directly replaced by three

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Application Note AN10174-01 A Low Impedance PIN Diode Driver

In the circuit of Figures 4 and 5, the PIN diodes operate at the same 10 to 100 uA, but the impedance for the parallel combination of Q1 and the two diodes is 25 to 2.5 ohms5.

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Attenuators

A dis-tinction is drawn between fixed attenuators and variable attenuators. Variable attenuators can be adjusted mechanically or manufactured with electronically controllable line components. The

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RF Attenuator: Selection Guide, Types, Benefits

ExploreRFattenuators:types(fixed,variable),selectioncriteria(frequency,impedance), design using chip resistors, and top manufacturers.

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AN ATTENUATOR DESIGN USINIG PIN DIODES

DESIGN OF CONSTANT IMPEDANCE ATTENUATOR A constant impedance attenuator can be achieved by a proper selection of resistance values for the symmetrical #-network

consisting of R,

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An adjustable attenuator designed with PIN tube

The PIN tube has the characteristics of low on-resistance, high off-resistance, and small capacitance between electrodes. So generally it can be used as SWITCH, and the design of adjustable

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