

Rf Circuit Design Theory And Applications Volume 1

Michael Ossmann: Simple RF Circuit Design - Michael Ossmann: Simple RF Circuit Design 1 hour, 6 minutes - This workshop on Simple **RF Circuit Design**, was presented by Michael Ossmann at the 2015 Hackaday Superconference.

Introduction

Audience

Qualifications

Traditional Approach

Simpler Approach

Five Rules

Layers

Two Layers

Four Layers

Stack Up Matters

Use Integrated Components

RF ICS

Wireless Transceiver

Impedance Matching

Use 50 Ohms

Impedance Calculator

PCB Manufacturers Website

What if you need something different

Route RF first

Power first

Examples

GreatFET Project

RF Circuit

RF Filter

Control Signal

MITRE Tracer

Circuit Board Components

Pop Quiz

BGA7777 N7

Recommended Schematic

Recommended Components

Power Ratings

SoftwareDefined Radio

Fundamentals of RF and mm Wave Power Amplifier Designs: Prof. Hua Wang - Fundamentals of RF and mm Wave Power Amplifier Designs: Prof. Hua Wang 1 hour, 32 minutes - ISSCC 2021 Virtual Session: Tutorial session **1**,.

Topic 110: The JFET Current Source - Topic 110: The JFET Current Source 18 minutes - In this video, we take a detailed look at how an N-channel JFET can be used as a simple, effective current source. Rather than ...

Gain block RF Amplifiers – Theory and Design [1/2] - Gain block RF Amplifiers – Theory and Design [1/2] 16 minutes - 212 In this video I look at the concept of the gain block – typically an **RF**, amplifier that can be included in the signal path of an **RF**, ...

Lesson 1 - Chapter 2: What is Circuit Theory? | Circuit Theory Fundamentals - Lesson 1 - Chapter 2: What is Circuit Theory? | Circuit Theory Fundamentals 5 minutes, 35 seconds - What exactly is **circuit theory**,, and why is it the foundation of all electrical and **RF**, engineering? In this lesson, you'll learn how ...

RF Circuit Construction - Part 1 - Radio Design 101 Appendix C - RF Circuit Construction - Part 1 - Radio Design 101 Appendix C 28 minutes - This 2-part appendix to the Radio **Design**, 101 video series covers issues important in successful construction of **radio frequency**, ...

Introduction to RF Circuit Design \u0026 Simulation Webinar - Introduction to RF Circuit Design \u0026 Simulation Webinar 1 hour, 52 minutes - Create your schematic **design**, and once you know you have finished your **circuit design**, set up you run the simulation and verify ...

RF Fundamentals Part 1/3 Learn All About Radio Frequency in 1 Hour - RF Fundamentals Part 1/3 Learn All About Radio Frequency in 1 Hour 1 hour, 5 minutes - RF, Fundamentals Part **1**,/3 Learn All About **Radio Frequency**, in **1**, Hour This course was taken from TestForce Systems with deep ...

Class E RF Amplifiers Explained - Circuit Design (Part 3) - Class E RF Amplifiers Explained - Circuit Design (Part 3) 22 minutes - Part 3 discusses the **theory**, behind class E amplifiers and explains how they achieve very high efficiencies. It also shows the ...

RFIC Unit 1 Lecture 1: Basic concepts in RF Design - RFIC Unit 1 Lecture 1: Basic concepts in RF Design 49 minutes

Flawless PCB design: RF rules of thumb - Part 1 - Flawless PCB design: RF rules of thumb - Part 1 15 minutes - Full course info: https://www.hans-rosenberg.com/epdc_information_yt?utm_source=yt-d-v1 Free mini-course: ...

Introduction

The fundamental problem

Where does current run?

What is a Ground Plane?

Estimating trace impedance

Estimating parasitic capacitance

Demo 1: Ground Plane obstruction

Demo 2: Microstrip loss

Demo 3: Floating copper

Best RF Design and Layout Practices | Sierra Circuits - Best RF Design and Layout Practices | Sierra Circuits 49 minutes - Are you ready to take your **RF design**, and layout skills to the next level? Join us for an in-depth webinar where we'll explore the ...

RF Design Basics and Pitfalls - RF Design Basics and Pitfalls 38 minutes - An introductory presentation of **RF design**, basics. For information on this and other advanced technology concepts, subscribe ...

RF Design Basics and Pitfalls

Specialized Analysis and CAD 1/2

Parts Models: Capacitance in Real Life

Inside Trick: Making power RF capacitors

Example RF Transmit Filter With Parasitics

Smith Chart: A graph of reflection coefficient or Γ or S_{11} or S_{22}

Matching on the Smith Chart: Amplifier with capacitive high impedance input converted to 50 ohms

RF Board Layout Rules to Live By

Transceiver Subsystems (Using the Superhet Principle)

What's so Great About Frequency Synthesis?

The Frequency Synthesizer Principle

Synthesizer Noise Performance

Link Budgeting Math (2/3)

Some Basic RF CAD Tools

Conclusions

RF Circuits and Systems - 1: up- and down-conversion, units in RF design - RF Circuits and Systems - 1: up- and down-conversion, units in RF design 17 minutes - A complete version of this course is now offered on Udemy: https://www.udemy.com/course/rfcircuitsandsystems_basicconcepts/

Lesson 19 - Chapter 7: Practical Analog Circuit Design | Analog Electronics for RF - Lesson 19 - Chapter 7: Practical Analog Circuit Design | Analog Electronics for RF 5 minutes, 12 seconds - Learn the fundamentals of practical analog **circuit design**, for **RF**, engineering. This lesson explains how engineers combine ...

RF Circuits for Superconducting Qubits: The Microwave Foundation of Quantum Computing - RF Circuits for Superconducting Qubits: The Microwave Foundation of Quantum Computing 53 minutes - Join us for an in-depth webinar exploring the critical role of **RF circuit design**, in quantum computing systems. This session will ...

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