

# Anti-tracking power supply system for broadcast and communication transmission



## Overview

This paper describes an analysis of power supply rejection and noise improvement techniques for an envelope-tracking power amplifier. Communications infrastructure equipment employs a variety of power system components. Power factor corrected (PFC) AC/DC power supplies with load sharing and redundancy (N+1) at the front-end feed dense, high efficiency DC/DC modules and point-of-load converters on the back-end. Average power tracking provides a DC supply voltage to the RF-PA. Although the envelope-tracking technique improves efficiency, its power supply rejection ratio is much lower than that of average power tracking or a fixed-supply. Abstract—Modern RF communication and electronic warfare applications require systems capable of amplifying signals with high bandwidths and high peak-to-average power ratios (PAPRs). What is a Radio Power Supply?

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## Article Content

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### Bridging RF and Power : An Introduction to Envelope Tracking ...

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### A Beginner's Guide to Understanding Telecom Power Supply Systems

Telecom power supply systems, particularly UPS systems, ensure that communication networks remain operational even during a power failure. A UPS, or uninterruptible power supply, ...

### Analysis and Design of Low-Noise Radio-Frequency ...

In this paper, the noise amplitude and noise power are calculated and measured with a 50-Ohm load impedance for convenience.

### Analysis and Design of Low-Noise Radio-Frequency Power Amplifier Supply ...

In this paper, the noise amplitude and noise power are calculated and measured with a 50-Ohm load impedance for convenience.

### Design Techniques for High-Efficiency Envelope-Tracking Supply ...

Abstract—This brief provides a brief tutorial on designing a high efficiency envelope-tracking supply modulator with recent techniques. Design challenges for 5G communication applications...

### AntCom: An effective and efficient anti-tracking system with dynamic ...

We present AntCom, an effective and efficient communication system that provides low latency and high tracking-resistance. AntCom improves the tracking-resistance of communication via ...

### Communications System Power Supply Designs

These are three of the many telecommunication power supply applications that challenge power system designers to analyze a wide range of power distribution architectures and converter topologies.

### ATSC 3.0 Broadcast Positioning System (BPS) Mesh Network

This paper describes the design of a BPS transmitter mesh network that would allow nationwide time synchronization based entirely on ATSC 3.0 broadcasts. This network could also be used to obtain ...

## Radio Power Supply: Types Functions Applications | Abi Royen

Without a proper power supply, even the most sophisticated radio systems cannot function effectively. This article explores everything you need to know about radio power supply, ...

### An 800-W Four-Level Supply Modulator for Efficient Envelope ...

Abstract—Modern RF communication and electronic warfare applications require systems capable of amplifying signals with high bandwidths and high peak-to-average power ratios (PAPRs).

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