

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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