

A GSM-EDGE high power amplifier utilising digital linearisation

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This paper describes a single-carrier UHF linear power amplifier for use in GSM-EDGE base station applications. The amplifier employs a sophisticated digital predistortion linearisation system as a method of improving both efficiency and signal vector error (SVE), whilst maintaining a relatively simple architecture. A key benefit of the technique is that it provides an RF input/output interface without the requirement for a local oscillator, which is traditionally required when employing a digital lineariser in an RF amplifier.

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