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(54) **MULTIPLE-MODE RF POWER AMPLIFIERS**

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(57) **ABSTRACT**

A multiple-mode RF power amplifier includes two power amplifiers, output combiner circuitry, and a switchable impedance circuit. The power amplifiers receive first and second input RF signals and produce first and second amplified RF signals. The output combiner circuitry combines the amplified RF signals to produce a combined amplified RF signal. The switchable impedance circuit has an input terminal coupled to an isolated port of the output combiner circuitry. When the switchable impedance circuit is in a first state, the isolated port is coupled through the switchable impedance circuit to a first impedance to configure the multiple-mode RF power amplifier as a balanced amplifier. When the switchable impedance circuit is in a second or third state, the isolated port is coupled through the switchable impedance circuit to a second or third impedance to configure the multiple-mode RF power amplifier as a first or second type of Doherty power amplifier.