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(54) **DOHERTY AMPLIFIERS AND AMPLIFIER MODULES WITH SHUNT INDUCTOR AND CAPACITOR CIRCUIT FOR IMPROVED CARRIER HARMONIC LOADING**

(52) **U.S. Cl.**  
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(57) **ABSTRACT**

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A Doherty amplifier includes a peaking amplifier, a carrier amplifier, and a combining node electrically connected to the carrier amplifier and the peaking amplifier. The Doherty amplifier includes a harmonic control circuit coupled to the combining node. The harmonic control circuit includes an inductor and a capacitor and the inductor and capacitor are connected in series between the first current conducting terminal and a ground reference node. An inductance value of the inductor of the harmonic control circuit and a capacitance value of the capacitor of the harmonic control circuit are selected to terminate second order harmonic components of a fundamental frequency of a signal generated by the carrier amplifier.

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