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(54) **SYSTEMS AND METHODS FOR FREQUENCY EQUALIZATION AND TEMPERATURE COMPENSATION IN RADIO FREQUENCY DEVICES**

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(57) **ABSTRACT**

A frequency equalizer is provided. The frequency equalizer includes a coupler including a main segment extending between a first port and a second port and a coupled segment disposed in a coupling relationship with the main segment and extending between a third port and a fourth port. The frequency equalizer further includes a first thermistor electrically coupled in series between the first port and an input line, a second thermistor electrically coupled in series between the second port and an output line, and a first shunt resistor coupled across the third port. The frequency equalizer simultaneously provides frequency equalization and temperature compensation for signals transmitted through the frequency equalizer.