signal to the load involves pulsing the RF signal, rather than applying a continuous wave signal to the load.

## SUMMARY

**[0008]** ~~A~~In one aspect of the present invention, a radio frequency generator is provided and includes a power control module, a frequency control module and a pulse generating module. The power control module is configured to generate a power signal indicating power levels for a plurality of target states of a power amplifier. The frequency control module is configured to generate a frequency signal indicating frequencies for the plurality of target states of the power amplifier. The pulse generating module is configured to (i) supply an output signal to the power amplifier, (ii) recall at least one of a latest power level or a latest frequency for one of the plurality of target states of the power amplifier, and (iii) *adjust a current power level and a current frequency of the output signal from a first state* to a second state based on the power signal, the frequency signal, and at least one of the latest power level and the latest frequency of the power amplifier.

**[0009]** In another aspect of the present invention~~other features~~, a method is provided and includes generating a power signal indicating power levels for a plurality of target states of a power amplifier in a radio frequency generator. A frequency signal is generated indicating frequencies for the plurality of target states of the power amplifier. An output signal is supplied to the power amplifier. At least one of a latest power level and a latest frequency is recalled for one of the plurality of target states of the power amplifier. A current power level and a current frequency of the output signal are adjusted from a first state to a second state based on the power signal, the frequency signal, and at least one of the latest power level and the latest frequency of the power amplifier.

the frequency control module is configured to generate the frequency signal based on the detected frequencies.

10. The radio frequency generator of claim 1, wherein, while the output signal is being transitioned from the first state to the second state~~, at least one of~~:

the power control module is configured to incrementally adjust the power signal to adjust the current power level to a target power level for the second state; or~~and~~

the pulse generating module incrementally adjusts the current power level to a target power level for the second state.

11. The radio frequency generator of claim 1, wherein, while the output signal is being transitioned from the first state to the second state~~, at least one of~~:

the frequency control module is configured to incrementally adjust the frequency signal to adjust the current frequency to a target frequency for the second state; or~~and~~

the pulse generating module incrementally adjusts the target frequency to the target frequency for the second state.

12. A method comprising:

generating a power signal indicating power levels for a plurality of target states of a power amplifier in a radio frequency generator;

generating a frequency signal indicating frequencies for the plurality of target states of the power amplifier;

supplying an output signal to the power amplifier;