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(54) Title: FREQUENCY MODULATED COMMUNICATION

FIG. 9

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receiving, at one or more ultrasonic transducers of an
implantable device, ultrasonic waves transmitted by an
interrogator

920

emitting, from the one or more ultrasonic transducers of the
implantable device, ultrasonic backscatter comprising encoded
data, wherein the data is encoded into the ultrasonic
backscatter by modulating a frequency of the ultrasonic
backscatter

WO 2023/183891 A3

(57) Abstract: Methods and systems for low-power communication using ultrasonic waves are described herein. The methods may include receiving, at one or more ultrasonic transducers of an implantable device, ultrasonic waves transmitted by an interrogator; and emitting, from the one or more ultrasonic transducers of the implantable device, ultrasonic backscatter comprising encoded data, wherein the data is encoded into the ultrasonic backscatter by modulating a frequency of the ultrasonic backscatter. The device may include an ultrasonic transducer configured to receive ultrasonic waves and emit ultrasonic backscatter; a switch configured to modulate a frequency of the emitted ultrasonic backscatter, and a circuit configured to operate the switch to encode data, in the emitted ultrasonic backscatter based on the frequency.

[Continued on next page]

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