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(54) **MEDICAL ULTRASONIC IMAGING SYSTEM WITH THREE-STATE ULTRASONIC PULSE AND IMPROVED PULSE GENERATOR**

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Fig. A1–A15 illustrating transmit waveforms (Dec., 1998).
Fig. B1–B3 illustrating transmit waveforms (Nov., 1998).
Fig. C1–C7 illustrating transmit waveforms (Nov., 1998).
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(57) **ABSTRACT**

A three-state, pulse width modulated, bipolar waveform is constructed by summing a first component with an inverted, time-shifted version of the first component. By properly selecting the time interval for the time shift of the second component, frequency filtering benefits can be obtained. The three-state waveform is generated by a switched voltage source that provides a low, constant source impedance for all three voltage states.

57 Claims, 13 Drawing Sheets

