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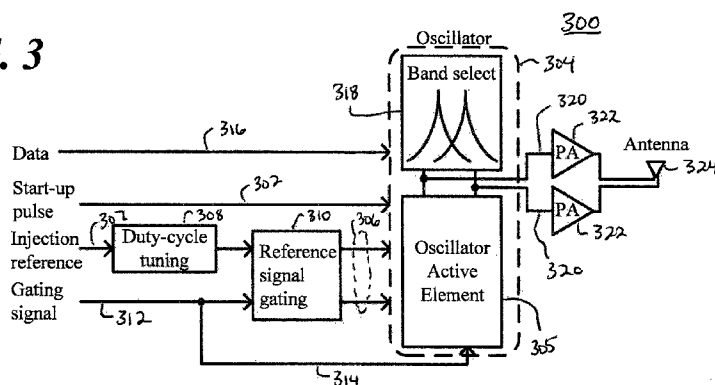
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(54) Title: METHOD AND APPARATUS FOR A DUTY-CYCLED HARMONIC INJECTION LOCKED OSCILLATOR

FIG. 3

(57) Abstract: A method and an apparatus for a duty-cycled injection locked oscillator is provided for frequency shift keyed (FSK) signal transmissions. The oscillator includes a resonance LC tank and a first switching device. The first switching device is coupled to the resonance LC tank and injects an initial current pulse with a predetermined pulse magnitude into the resonance LC tank. The initial current pulse also fixes an initial phase of the duty-cycled injection locked free-running oscillator in response to the predetermined magnitude of the initial current pulse to enable fast settling of injection locking and high data rate operation of the duty-cycled injection locked oscillator. The oscillator also includes a second switching device, such as a differential pair of switching devices. The second switching device is coupled to the LC resonance tank for injecting a gated periodic reference signal having a duty cycle modified to reduce power of the reference signal by approximately seventy-five per cent.