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USING DIFFERENT TYPES OF SIGNAL
MIXING MODES**(52) **U.S. Cl.**CPC *H03D 7/1458* (2013.01); *H03D 7/1441*
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(2013.01); *H03D 7/1433* (2013.01)(71) Applicant: **TEXAS INSTRUMENTS
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ABSTRACT(72) Inventors: **Sachin Kalia**, Dallas, TX (US); **Tolga
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A frequency multiplier includes an input section having inputs to receive an input signal having an input frequency, a mixer section, and an output section magnetically coupled to the input section and generating an output signal in response to the input signal. The mixer section may be coupled to the input section by a common mode node forming a path for a common mode current to flow to the mixer section and be magnetically coupled to the common mode node. The input section may generate a signal current, and the mixer section may be magnetically coupled to the input section and be directly capacitively coupled to the input section through a capacitor in a signal current path. The mixer section may have differential inputs capacitively coupled to the input section and also be coupled to the input section through a current path. A current helper section may be coupled to the current path.

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