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(54) **FILAR ANTENNA ELEMENT DEVICES AND METHODS**

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(57) **ABSTRACT**

Single band and multiband wireless antennas are an important element of wireless systems. Competing tradeoffs of overall footprint, performance aspects such as impedance matching and cost require not only consideration but become significant when multiple antenna elements are employed within a single antenna such as to obtain circular polarization transmit and/or receive. Accordingly, it would be beneficial to provide designers of a wide range of electrical devices and systems with compact single or multiple frequency band antennas which, in addition to providing the controlled radiation pattern and circular polarization purity (where required) are impedance matched without substantially increasing the footprint of the antenna and/or the complexity of the microwave/RF circuit interfaced to them, whilst supporting multiple signals to/from multiple antenna elements in antennas employing them. Solutions present achieve this through provisioning one or more capacitive series reactances discretely or in combination with one or more shunt capacitive reactances.