Multi-Frequency RF Energy Harvesting System and Controller Using Reconfigurable Antennas

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Multi-Frequency RF Energy Harvesting System and Controller
- Controller algorithm and circuit
  - Measures available RF energy
- Adjusted antenna design and matching network
  - Reconfigure radio frequency (RF) energy harvesting system
- Allows a wide range of frequencies to be picked up
  - Reconfigurable antenna with switches
- Incorporated into an existing energy harvester
  - Flexible based on device

Advantages of Multi-Frequency RF Energy Harvesting System and Controller
- Reconfigurable antenna with switches
- Maximum amount of energy harvested
  - Fixate the frequency with most energy
- Periodic sweeps
- Antenna/circuitry optimized for single frequency range
- Determines the strongest RF signal

Figure 1. Representative model of Multi-Frequency RF Energy Harvesting System and Controller

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