

Technology Transfer

Area of Technology: Electronics & Communication Engineering

Title of the Innovation: ENERGY HARVESTING FROM FAR FIELD RF SIGNAL

Brief About Innovation

Energy generation, consumption and environmental sustainability are become the global issues and plays very important role in the development of any nation. In past years, the change in the technology has an impact on the human living lifestyle. The advancement in devices has increased the energy demand and consumption. In order to minimize the usage and proper utilization, the various energy saving and harvesting schemes have become the most unanimity in the world. In last decade, the energy consumption has increased dramatically due to innovations in new technologies. The energy consumption in the world has increased by 39% during the years 1990-2008. The common source for electricity generation in the world is fossil fuels like coal and peat which generate nearly 40.8% of total energy. However, these natural resources are limited and may not be sufficiently available in the future. Therefore, upcoming technologies cannot depend on these resources.

Salient Features:

- The present invention relates to a system for converting the ambient energy resources to conventional energy resources such as direct current. More particularly, the system consumes the energy from the Radio frequency signals present in the environment and convert the captured energy into usable higher-level energy.
- The present invention discloses device which will take energy from RF signals present in the environment and convert that small energy (in mV) to higher level(5V), so that energy can be used for different application.
- The primary object of the present invention is to provide a system and device that consumes the energy from the environment and converts the non-conventional energy resources to conventional energy resources.
- The present invention involves the configuration of the device and involves capacitor charge pump amplifier and voltage regulator to provide suitable DC voltage without any fixed external input DC voltage.

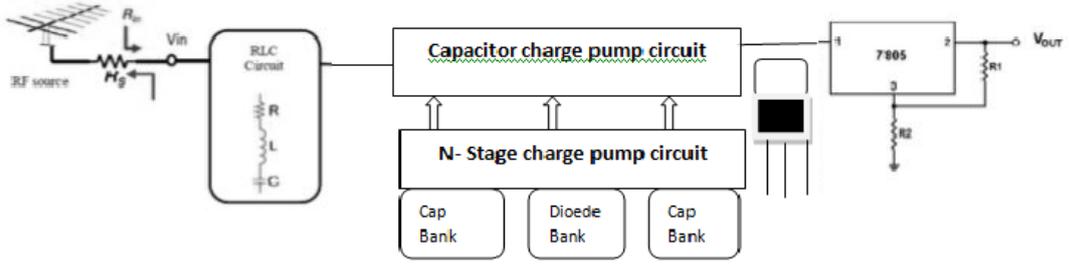


Figure- 1