TITLE: DESIGN AND IMPLEMENTATION OF ANTI-ALIASING FILTER FOR ACTIVE POWER FILTERS

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ABSTRACT:

This project presents the design and implementation of anti-aliasing filter for active power filters using eSim software. This filter is implemented using 4^{th} order Butterworth filter which is designed using multiple-feedback architecture by placing the resistors and capacitors to meet established specifications. The calculations of circuit-component values are also focused. Filters experience harmonic suppression caused by insufficient sampling rate leading to overlapping of frequency components and deterioration of power quality. This anti-aliasing filter plays a critical role in solving spectral aliasing and heightening the accuracy of data acquisition in harmonic suppression.

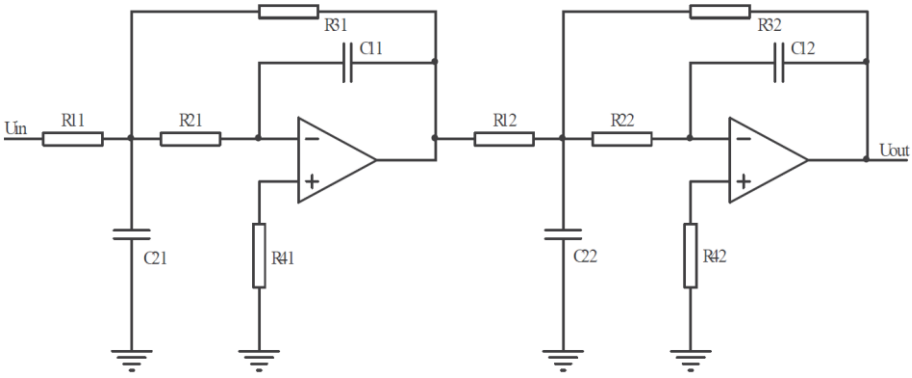

Fig1: Fourth-order low-pass Butterworth anti-aliasing filter circuit

JOURNAL/PUBLICATION DETAILS:

TITLE OF THE PAPER: Anti-aliasing Filter Circuit Design for Active Power Filter

NAME OF THE JOURNAL/PUBLICATION: IEEE Computer Society-2010 Second International Conference on Intelligent Human-Machine Systems and Cybernetics

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VOLUME: Volume: 1, Pages: 147-150

REFERENCE: https://doi.ieeecomputersociety.org/10.1109/IHMSC.2010.44