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Gaetano Pasini, Lorenzo Peretto, Elisa Pivello, Roberto Tinarelli

Low-cost handheld instruments performing a large variety of electrical measurements are recently appeared on the market. Their diffusion is mainly due to the availability of integrated circuits that carry out many measurement functions, thus simplifying the instrument implementation and reducing the costs. In this paper, the accuracy performances of an integrated circuit featuring rms and power measurements are evaluated under both sinusoidal and non-sinusoidal conditions.

The implemented measurement bench and the obtained results are presented. The results show that the accuracy of the device under test is satisfactory for active power and current rms values, instead of the voltage channel accuracy is significantly worst.

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