



Fractal Elements and their Applications (Analog Circuits and Signal Processing)

By Anis Kharisovich Gil'mutdinov, Pyotr Arkhipovich Ushakov, Reyad El-Khazali

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This book describes a new type of passive electronic components, called fractal elements, from a theoretical and practical point of view. The authors discuss in detail the physical implementation and design of fractal devices for application in fractional-order signal processing and systems. The concepts of fractals and fractal signals are explained, as well as the fundamentals of fractional calculus. Several implementations of fractional impedances are discussed, along with comparison of their performance characteristics. Details of design, schematics, fundamental techniques and implementation of RC-based fractal elements are provided.

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Editorial Review

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About the Author

Anis Kharisovich Gil'mutdinov is a Professor at Kazan National Research Technical University, in Kazan, Russia.

Pyotr Arkhipovich Shakov is a Professor at Kalashnikov State Technical University in Izhevsk, Russia.

Reyad El-Khazali is an Associate Professor of Electronics Engineering at Khalifa University of Science, Technology, and Research.

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