

عنوان مقاله:

FIR Window derived from Cosine Hyperbolic Function

محل انتشار:

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خلاصه مقاله:

A new simple form window with the application of FIR filter design based on the exponential function is proposed in this article. An improved window having a closed simple formulawhich is symmetric ameliorates ripple ratio in comparison with cosine hyperbolic window. The proposed window has been derived in the same way asKaiser window, but its advantages have no power series expansion in its time domain representation. Simulation results show that proposed window provides better ripple ratio characteristics which are so important for some applications. A comparison with Kaiser windowshows that the proposed window reduces ripple ratio in about 6.4dB which is more than Kaiser s in the same mainlobe width. Moreover in comparison to cosine hyperbolic window, the proposed window decreases ripple ratio in about 6.5dB which is more than cosine hyperbolic s. The proposed window can realize different criteria of optimization and has lower cost of computation than its competitors

کلمات کلیدی:

Window functions, Kaiser window, FIR filter design, Cosine hyperbolic window

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