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Formulas 1

Fast Fourier Transform (FFT)

Open table with initial data and use Analysis → Fast Fourier Transform menu item to perform FFT.

Formulas

MagicPlot uses 'electrical engineering' convention to set the sign of the exponential phase factor of FFT. ¹⁾

Here c_n is signal components and C_n spectrum components, $n = 1 \dots N$.

Normalize Check Box	Forward Transform	Inverse Transform
Unchecked	$C_n = \sum_{k=0}^{N-1} c_k e^{-2\pi i k n / N}$	$c_n = \frac{1}{N} \sum_{k=0}^{N-1} C_k e^{2\pi i k n / N}$
Checked	$C_n = \frac{1}{N} \sum_{k=0}^{N-1} c_k e^{-2\pi i k n / N}$	$c_n = \sum_{k=0}^{N-1} C_k e^{2\pi i k n / N}$

¹⁾ Most scientific applications uses the same sign conventions. But note, that the sign of exponential phase factor in Numerical Receipts in C, 2nd edition, p. 503 is the opposite

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<https://magicplot.com/wiki/> - MagicPlot Manual

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