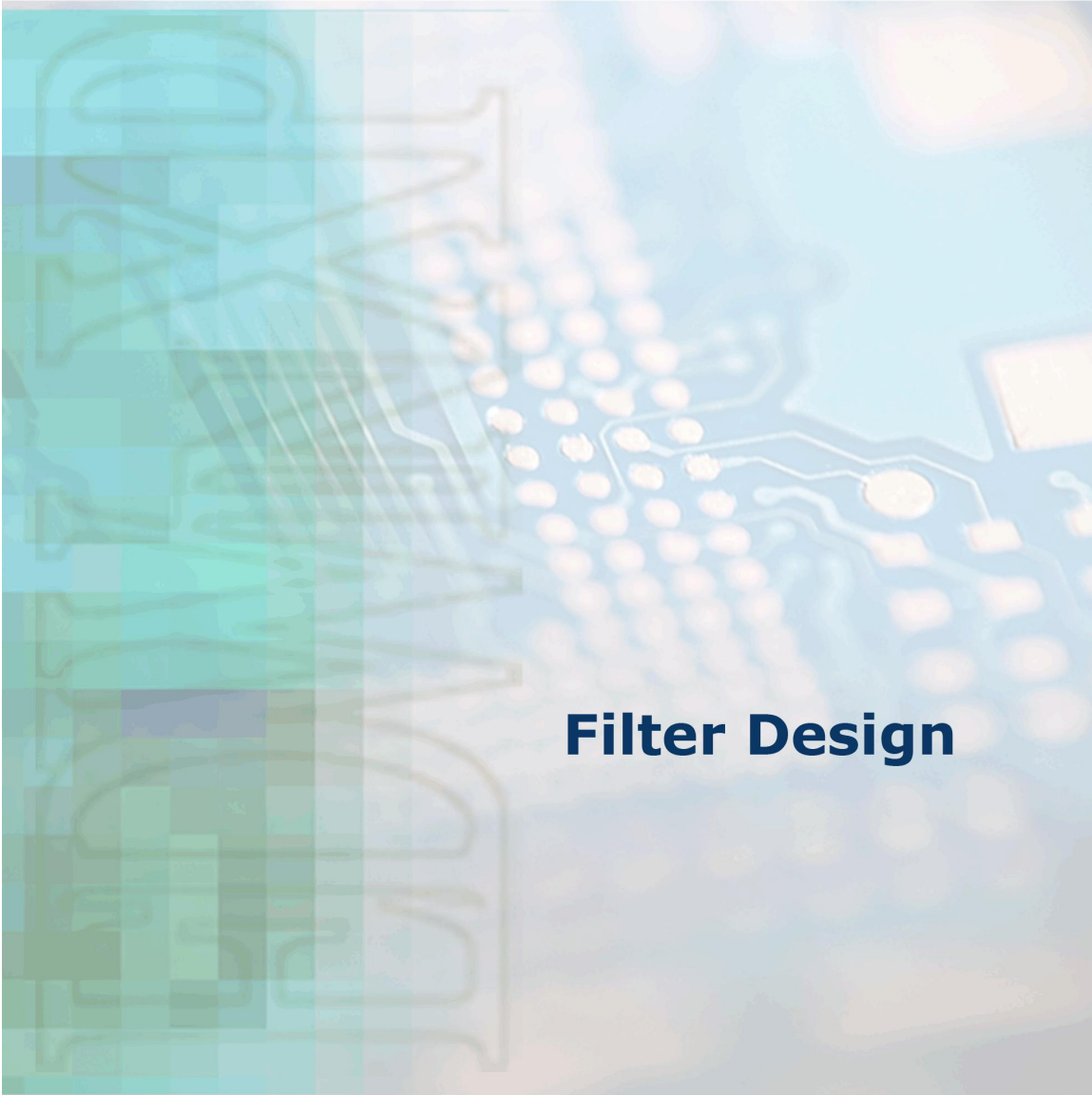


Electronic Design for Windows
EDWINXP



Filter Design

VISIONICS

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VISIONICS

Filter Designer

Filter designer helps to design different types of active filters by entering some specifications. We can generate Filter circuits in the schematic editor, which can be used as part of other circuits. The system library includes prototype circuits for active low-pass, high-pass, band-pass and band-stop filters. Filter Designer allows to select one of the variants of those filters (Chebyshev, Butterworth, Bessel, Elliptic (Cauer) or Ideal) and specify required filter output parameters: -frequency and quality range. The parameters (capacitance and resistance) for filter circuit components are calculated and updated in the circuit, which subsequently may be appended to the project.

Invoking Filter designer to design filters

1. From **Schematic Editor** select **Tools** → **Filter Designer** in the schematic editor.
2. Choose the desired filter from the tree view and then select the desired type from the drop down list.
Set the values for each parameter in the right pane

Quality range

Quality factor includes three options – $Q \leq 5$, $5 < Q \leq 20$, $Q > 20$.

Output frequency

Output frequency should be in the range 10 Mill Hertz to 1 Giga Hertz.

Calculate parameters as

The drop down list includes Ideal values and Practical values

Component Parameters

Universal filter have the option to set the capacitance and resistance values.

Append mode

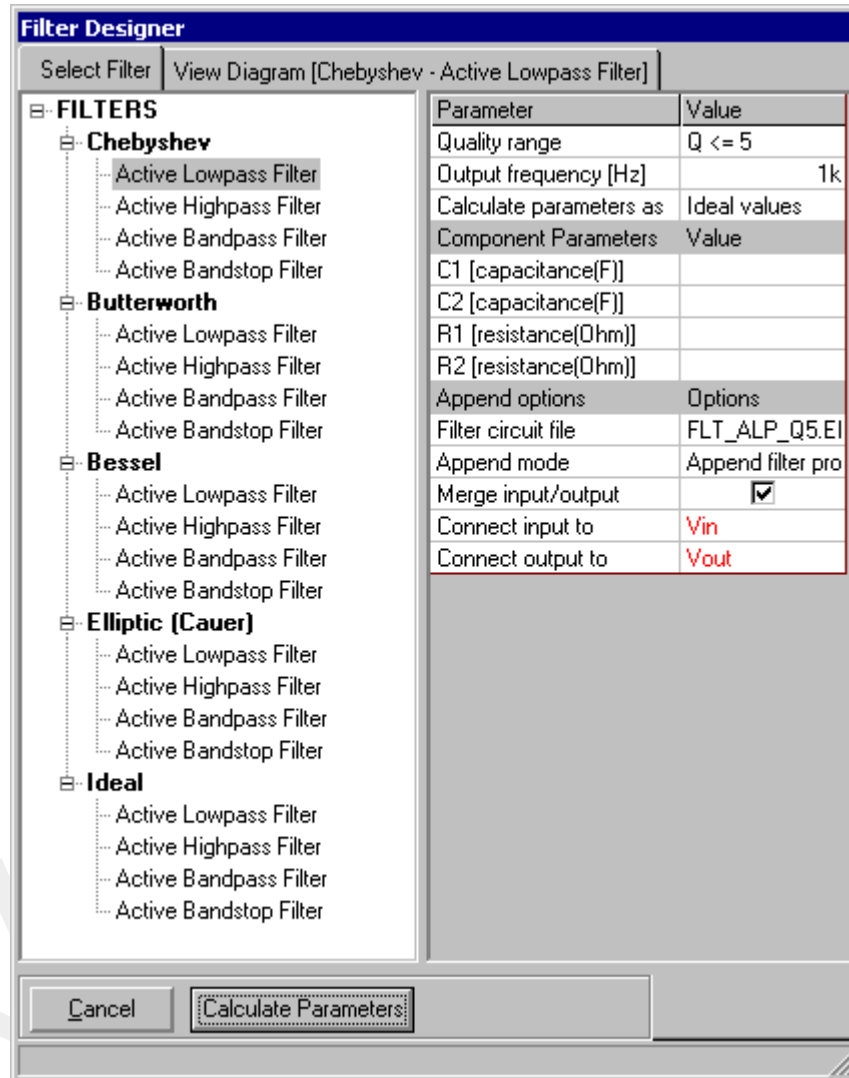
Append filter project to current page

Append filter project in new page, and the user can enter name of new page.

Append filter project as sub-circuit. The user has the option to enter the circuit name.

Merge input/output

To connect the input and output of filter to current nets in the project check the Merge input/output box.



3. After setting the parameters click on **Calculate Parameters** Button. Component parameters values are automatically calculated depending up on the output frequency.
4. Use the View Diagram tab to view the circuit.
5. Click on **Import Diagram** button. The Diagram of the filter will get tagged to the cursor, place the diagram in the required position on the work sheet.