Atyune

Matching circuit design – Powerful, Easy, Accurate Release 3.5

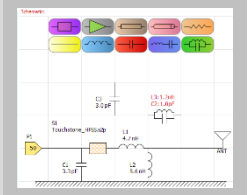
Atyune is a powerful application specifically created to facilitate the design of impedance matching circuits for Radio Frequency (RF) devices and antennas.

With Atyune it is possible to greatly speed up the antenna and RF design process: no need to create projects, set up variables, layouts or other time consuming operations; it can literally take less than one minute from starting the software to the final circuit.

Based on many years of experience on both theoretical development and practical implementations, Atyune is a great tool to have on the lab bench, as well as in the office to perform thorough analysis of RF and antenna performance.

Atyune easy to use interface suits lab technician with little or no RF experience, as well as highly skilled senior engineers.

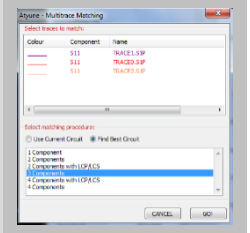
Atyune offers wide range of innovative features and tools to simplify tasks commonly performed when designing matching circuits or handling S-parameters files. For instance, a simple and powerful wizard guides the measurements of multiport devices to create S-matrices with a number of ports exceeding that of the VNA used, tolerances analysis can be done with a single click, and a simple Time Domain Analysis tool is also available.



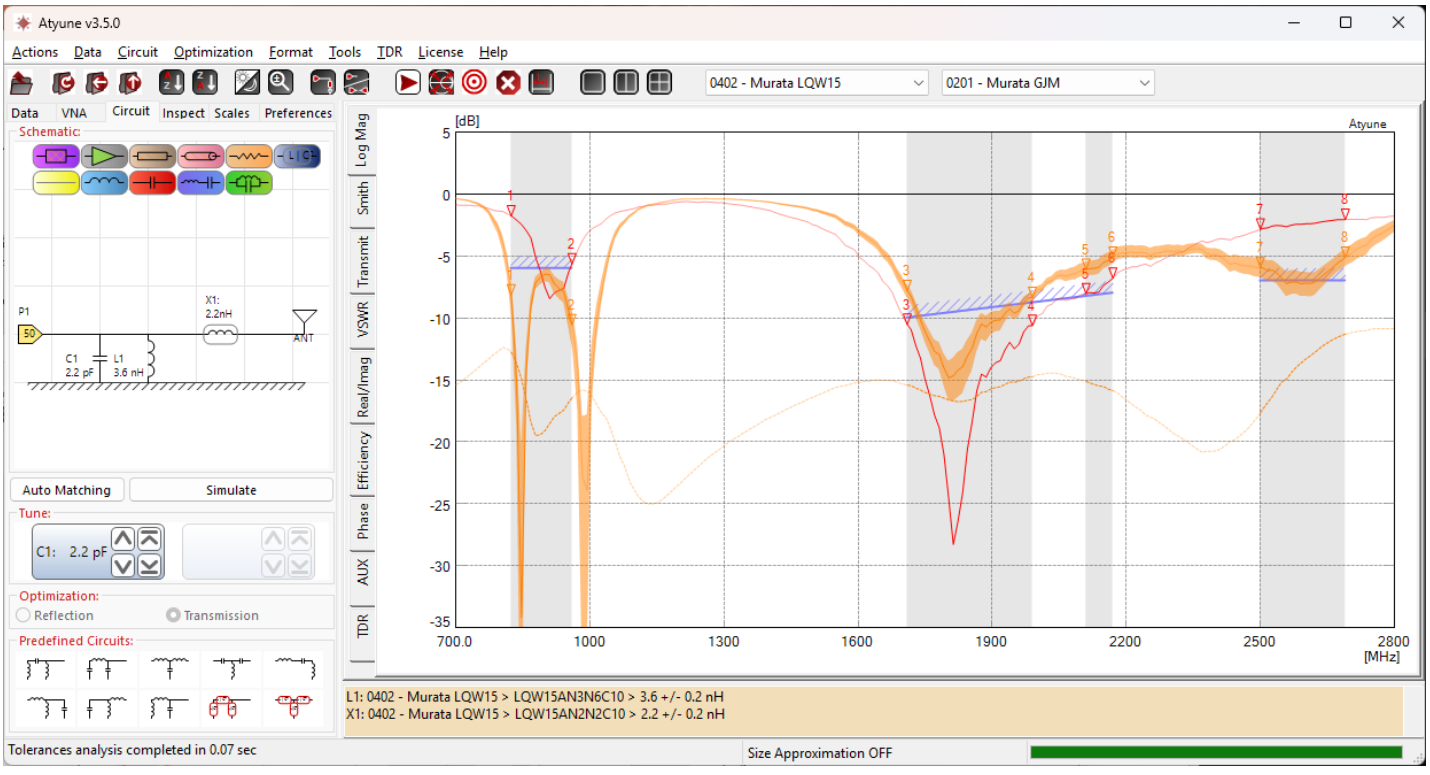
Circuit Editor



TDR

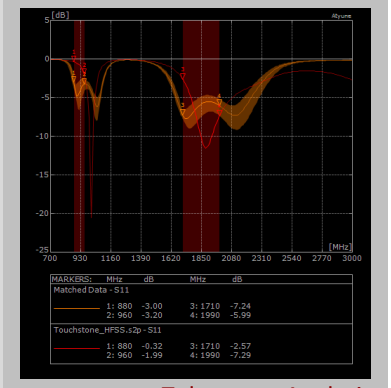


Multitrace Matching

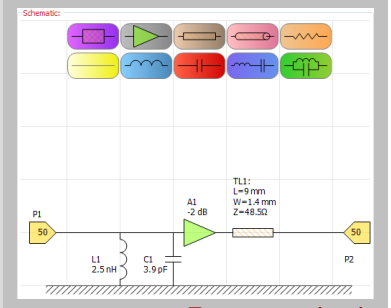


MAIN FEATURES:

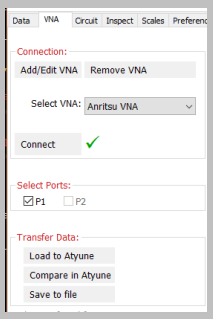
- Automatic generation of matching networks with up to 4 components
- Manual design of matching networks using the GUI, simply dragging new components from the toolbar
- Automatic optimization of arbitrary matching circuits
- Accurate library of real components (inductors, capacitors)
- Transfer of S-parameters directly from VNA
- Coaxial cables and microstrip lines models
- Optimization for maximum power delivered to the load (antenna) or minimum reflected power
- Automatic calculation of losses in matching circuit
- Optimization targets definable by the user
- Unlimited number of optimization frequency ranges
- Comprehensive list of common communication frequency ranges, expandable by users
- Archive to easily store and retrieve measurements at laboratory/company level
- Multitrace Matching: Simultaneous matching of any number of S-parameters
- First order approximation of layout
- Tolerances analysis in one click
- Two-ports networks optimization
- Conjugate matching (port impedance definable using an S-parameter file)
- Graphs in vector format that can be exported to PowerPoint/Word
- Clear frequency bands highlight
- Operations on S-parameters (union, division, Q, Bandwidth Potential, average, envelope, group delay, phase difference...)
- Up to 4 different formats displayed simultaneously
- Data interpolation and smoothing
- User's defined naming and colouring schemes
- Wizard for combining separate S-parameter files into a single S-matrix in a very simple way.
- Universal passive components for quick optimization with fixed layout.
- Auto Port Extension calculation
- Time Domain Analysis with time gating of S-parameters.
- v.3.5: New graphic engine with SVG export



Tolerances Analysis

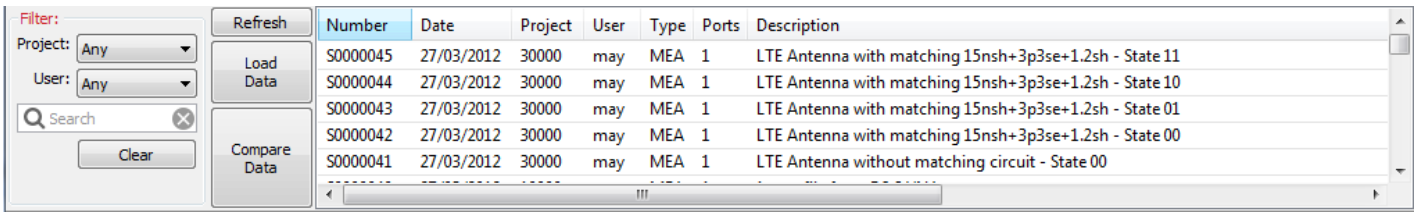


Two-ports circuit



VNA Connection

Archive Interface



System Requirements:
Windows 10, 11

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