Contents

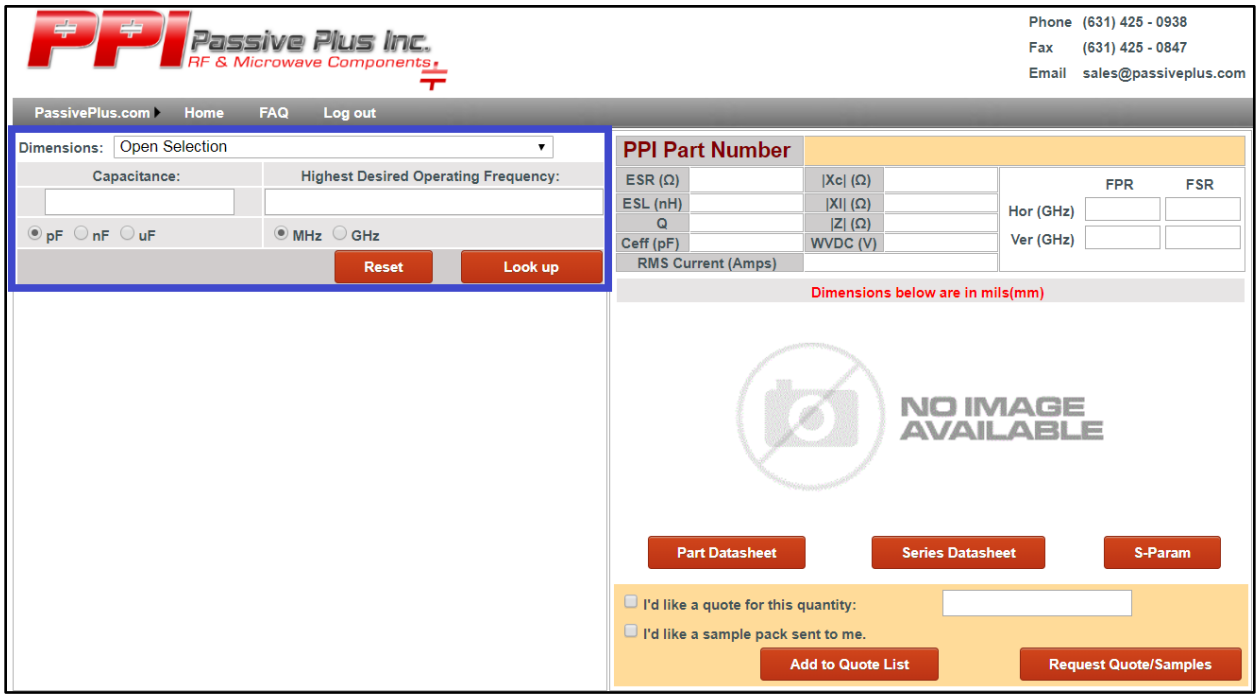
Introduction

Welcome to PPI's Capacitance Application Program (C.A.P.). This web-based application is intended to aid in a user's selection of PPI's MLCC product line.

Technical Tutorial

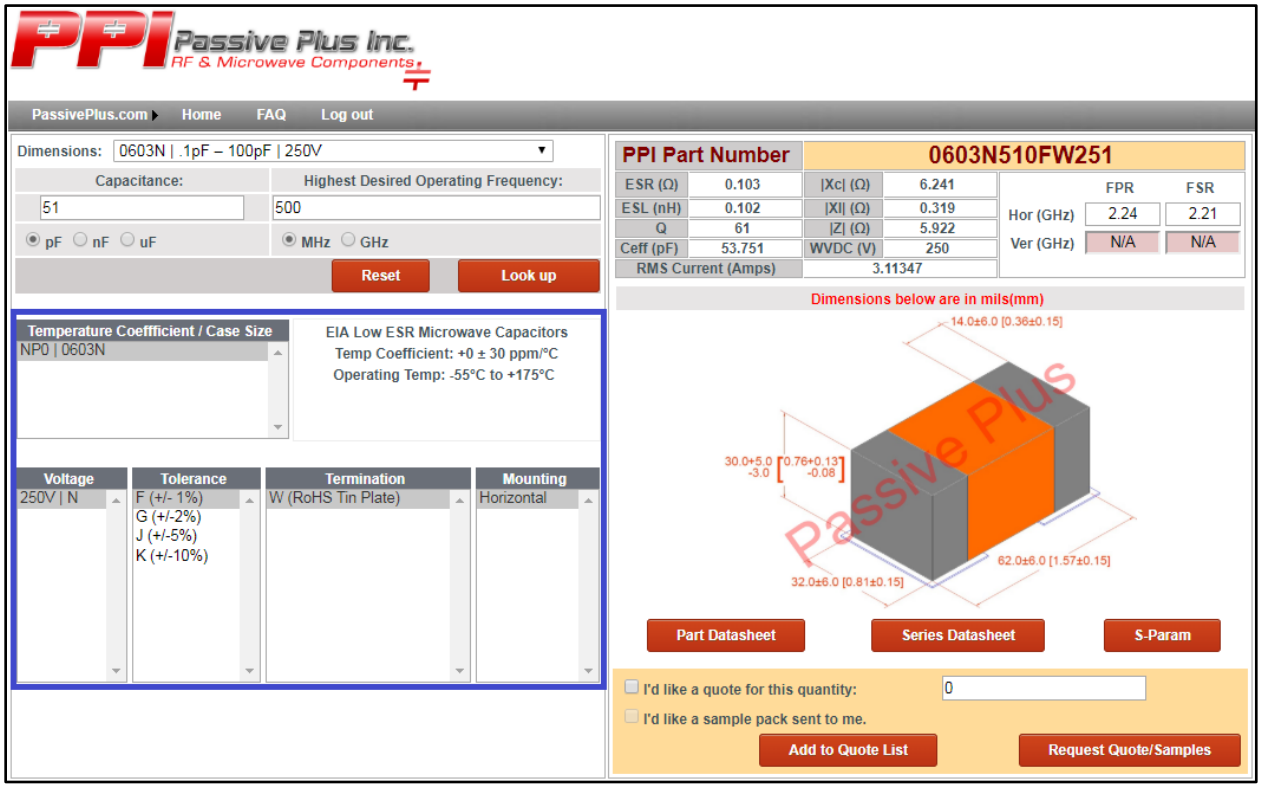
Initial Selection

C.A.P. is intended to present data on a selected MLCC, starting with the users desired capacitance **Dimensions**, **Capacitance**, and **Frequency of interest**. The screenshot below shows the initial default page setting. Areas of interest are presented with a Blue Box…



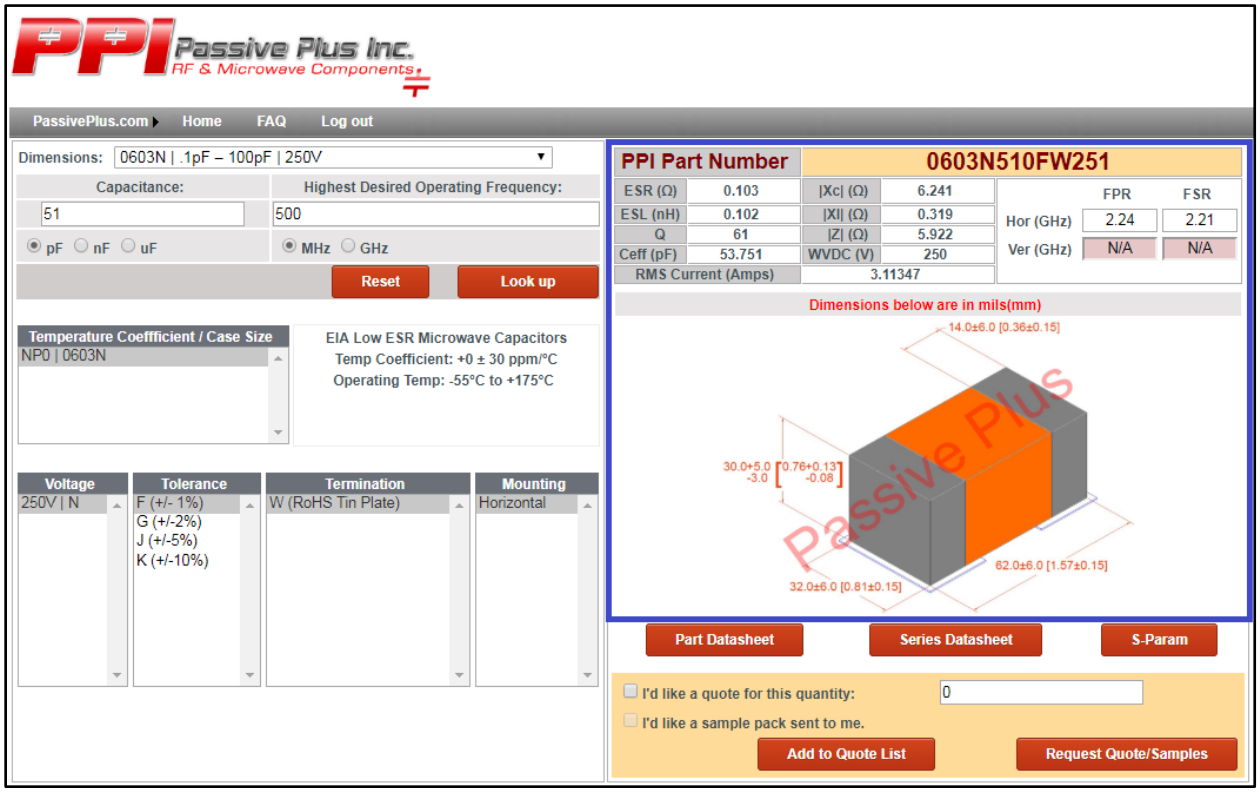
Secondary Filtering

After the initial selection, the user can further filter by **Temperature Coefficient**, **Voltage**, **Tolerance**, **Termination type**, and **Mounting**. In the case below, the user has entered data on PPI's 0603N, 51 pF, with the frequency of interest at 500 MHz…



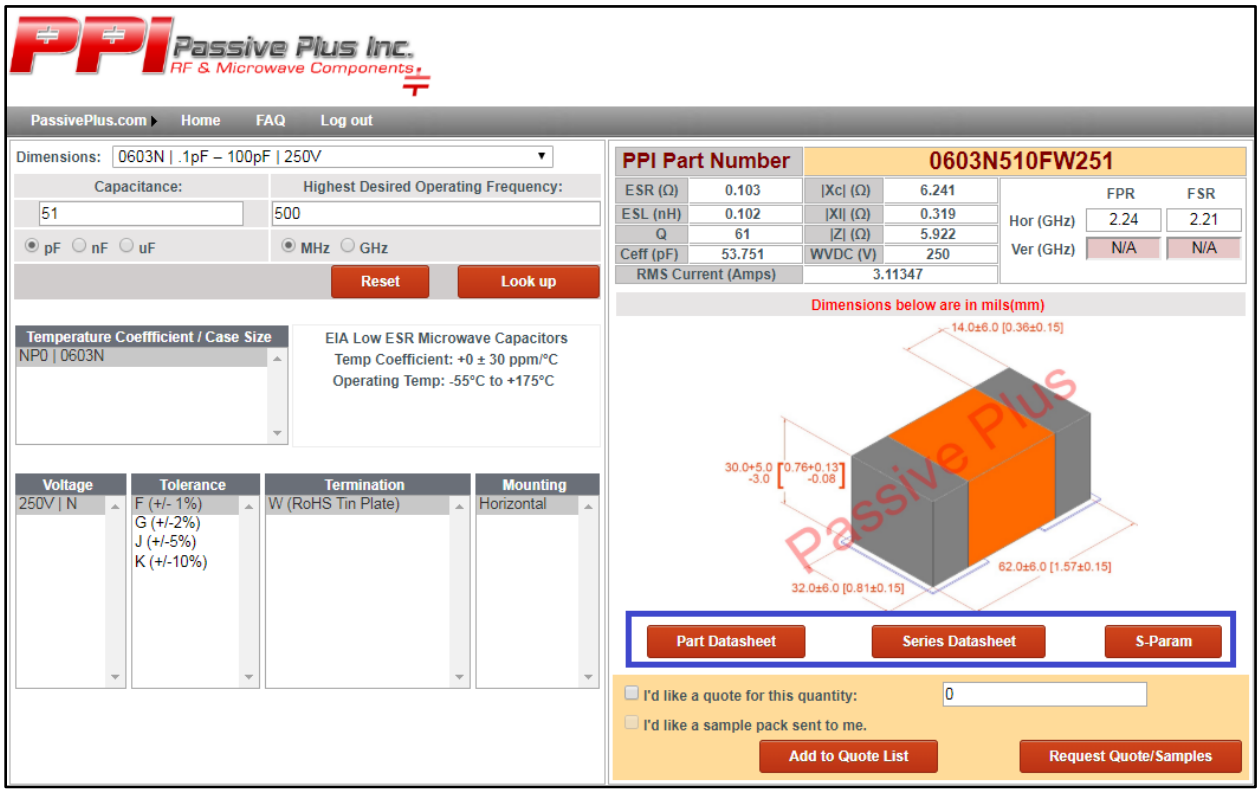
Calculations

Based on the user's selection, C.A.P. will calculate various RF parameters such as **ESR**, **ESL**, **Q**, **Ceff**, **|Xc|**, **|Xl|**, **|Z|**, **WVDC**, **RMS Current**, **FPR**, and **FSR**. The user will also be presented with a pictorial, showcasing the dimensions of the selected part…



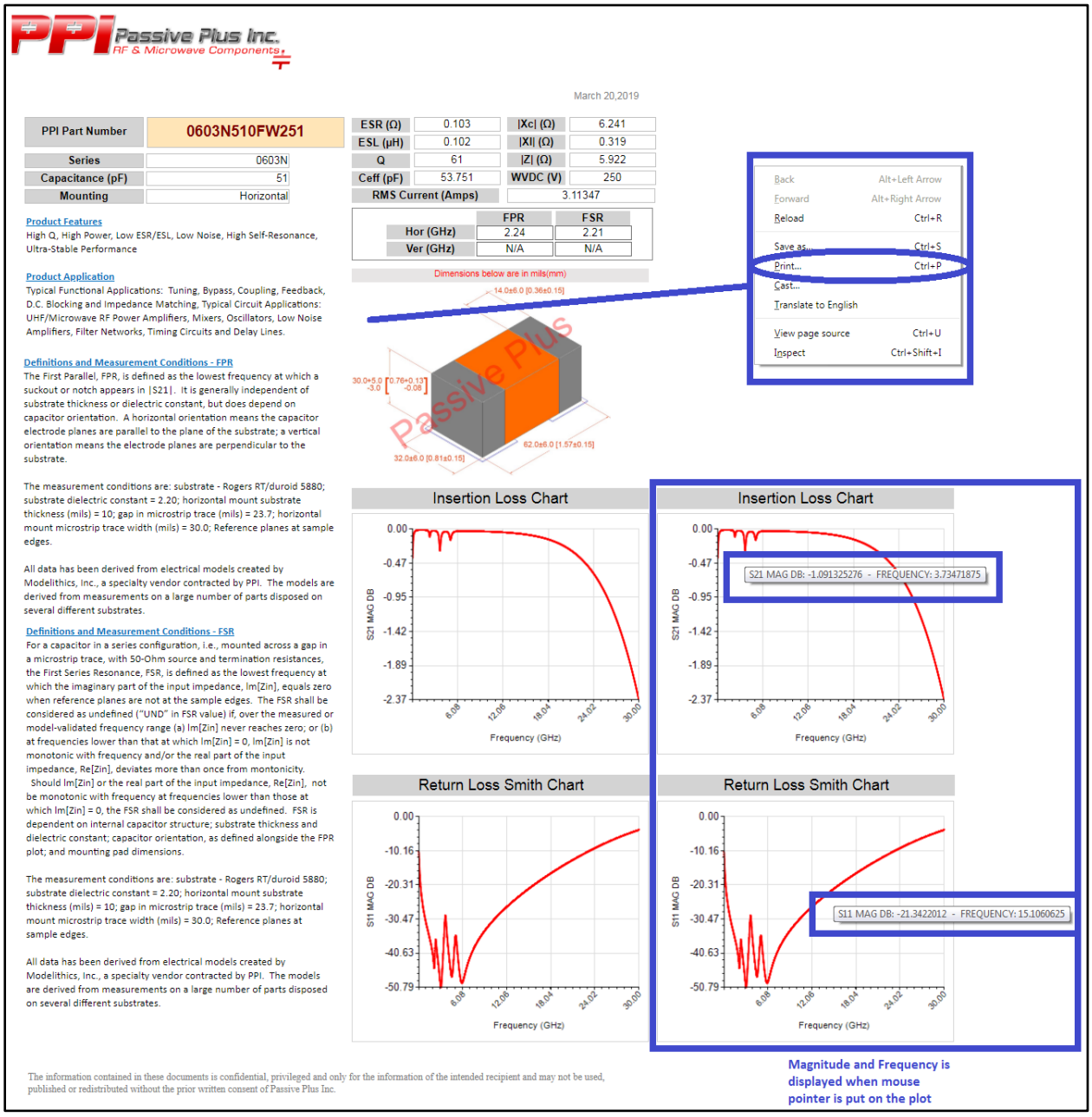
Datasheets/S Parameters Screens

Three different options are available to the user; The **Parts Datasheet**, the **Series Datasheet**, and **S-Parameter**. These options lead the user to a series of pop-up windows…



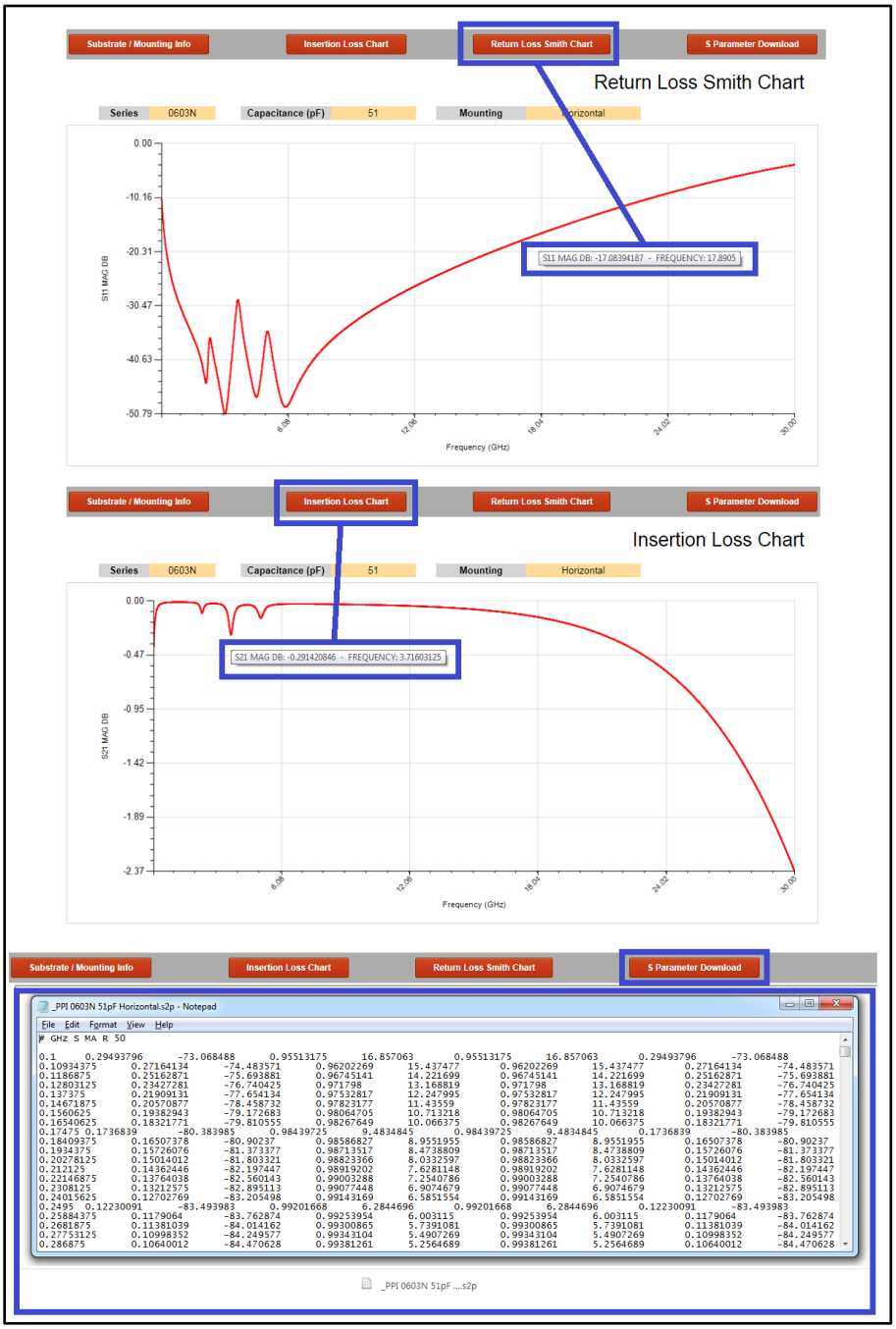
Parts Datasheet

Clicking the Parts Datasheet displays a custom-made page, containing the information put in the user for the frequency of interest, along with the corresponding Insertion Loss, and Return Loss charts. The user can print this page out by right clicking on the window and selecting Print…



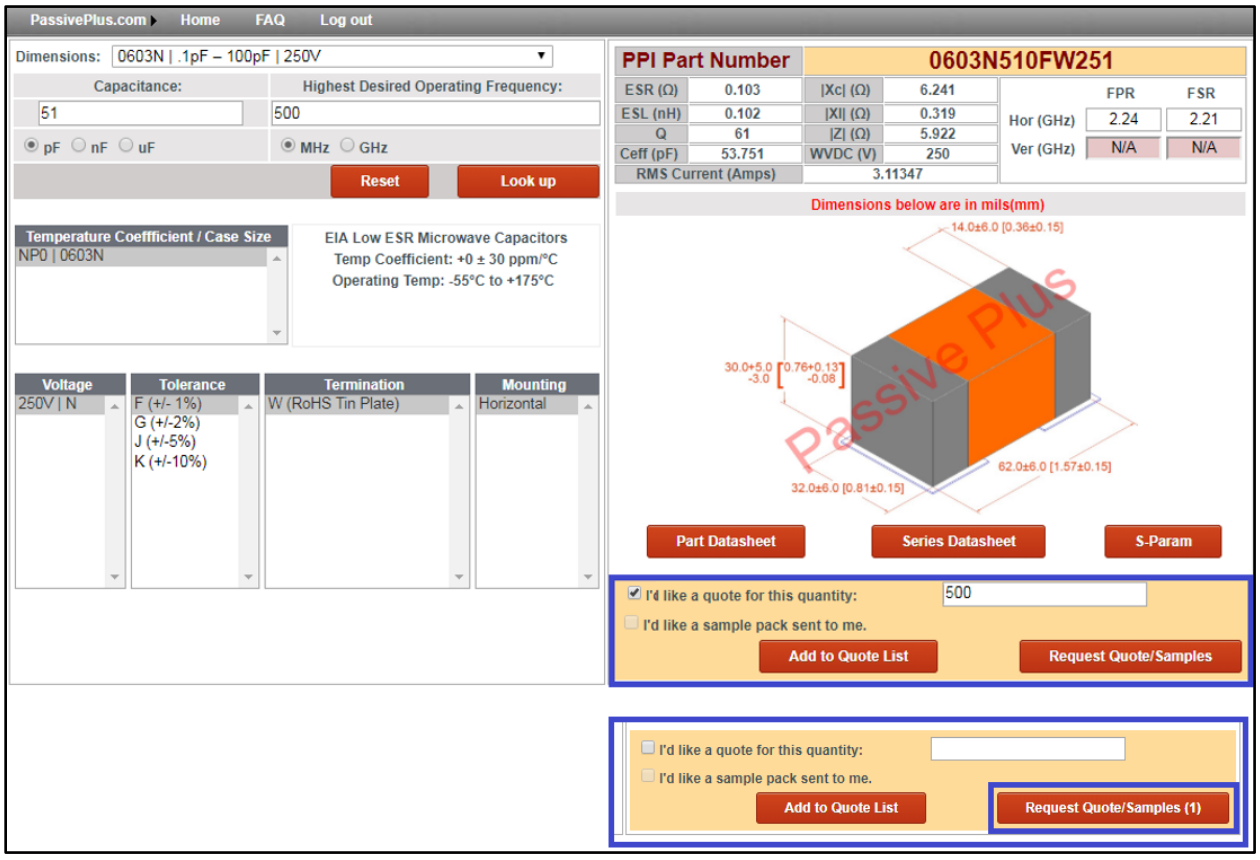
S-Param

This presents the user with a large plot of the Insertion and Return Losses. This screen will also allow the user to download the S-Parameter file, and access information on the mounting and measurement conditions.

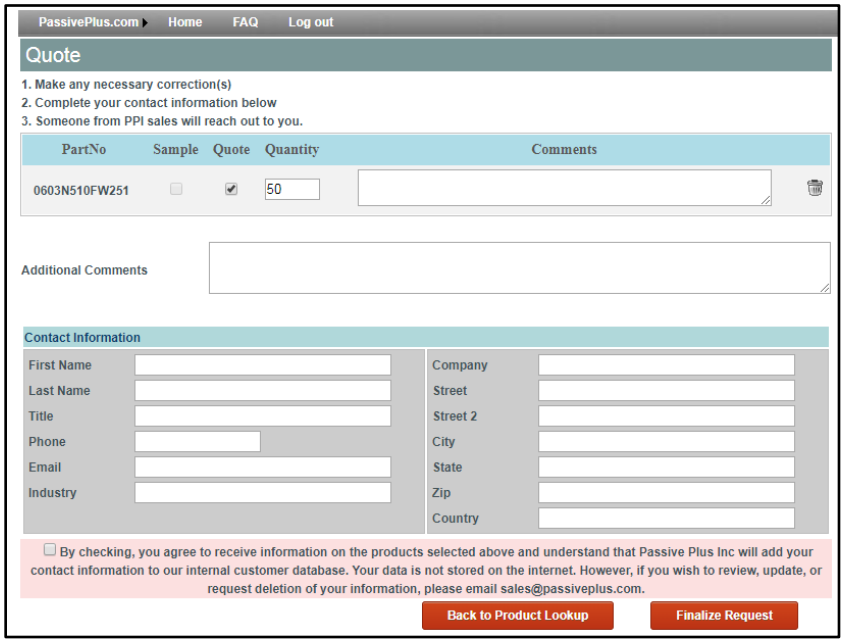


Quoting

The lower right section of C.A.P. displays the Quoting interface. When the user has selected a part number (selection noted by the **PPI Part Number** in the upper right section of C.A.P.), you can insert the number of parts desired. The user will then see the page reset, with an update on the request quote button



The user can send their quote request, after filling out the information presented in the page.



Notes/Issues

If anyone finds any concerns, or has any constructive feedback, do not hesitate to reply. Send all e-mails regarding C.A.P. to sales@passiveplus.com, adding “C.A.P. Feedback” in the subject line.

- Presently we have data on the following series:
  - High Q (>10,000) Capacitors: 0505C/P, 1111C/P, 2225C/P
  - EIA Hi Q Capacitors (Ultra Low ESR): 0201N, 0402N, 0603N, 0708N, 0805N, 1111N
  - Broadband: 01005BB104, 0201BB103, 0201BB104, 0402BB103, 0402BB104, 0805BB103
- The PPI C.A.P. calculator presently accepts input frequencies from 200 MHz to 3000 MHz. Please see future updates. The frequency response range (S2P measurements) is as indicated in their individual touchstone files for the cap selected.
- Clicking the Substrate / Mounting Info in the S-Param Screen may cause issues with user’s operating Google Chrome. The user will be notified that a document has downloaded onto their page, which contains the information.