Evaluation Boards for PolyStrata® Filters

This document is intended to provide general information on the evaluation boards available for PolyStrata® filters. These boards are designed to provide a quick method to evaluate the performance of PolyStrata® components in a typical lab environment. Please contact us with any specific questions and we will help guide you towards an effective way to evaluate these devices for your specific requirements.

General Overview

Following are some general recommendations for use of the PolyStrata® filter evaluation boards:

PolyStrata® evaluation board design:

- The PolyStrata® filter is solder attached to the printed circuit board and connected with transmission lines to input and output connectors

- A separate transmission line, designed to be the same length as the transmission line connecting the filter to it's input and output connects, is provided with input and output connectors

- The connectors used on the evaluation board are SMPM plug connectors with full detent

- Through holes are provided for mechanical connection as needed, board size is approximately 1.5" by 2"

Typical use of the PolyStrata® evaluation board:

- A network analyzer should be calibrated to the end of appropriate cables to connect to the SMPM connectors

- Using the calibration, the network analyzer is connected to the through transmission line through SMPM3 and SMPM4 and the measurement saved

- The network analyzer is then connected to the PolyStrata® filter using SMPM1 and SMPM2

- The saved measurement for the through transmission line is then added back to the filter measurement to remove the loss from the connectors and PCB transmission line, yielding a view of just the filter

Evaluation Board Layout:

- PolyStrata® filter, labeled PS1
- Filter input: SMPM1, Filter output: SMPM2
- Through line input: SMPM3, Through line output: SMPM4
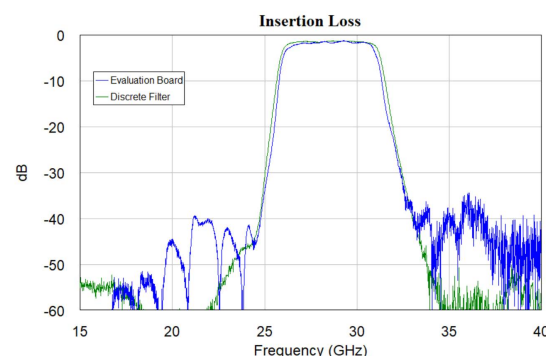
Evaluation Board Performance:

- Performance should be similar to available filter S-parameters

- Some performance, such as out of band rejection may be reduced from filter S-parameter data due to board design and simplified de-embedding procedure

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