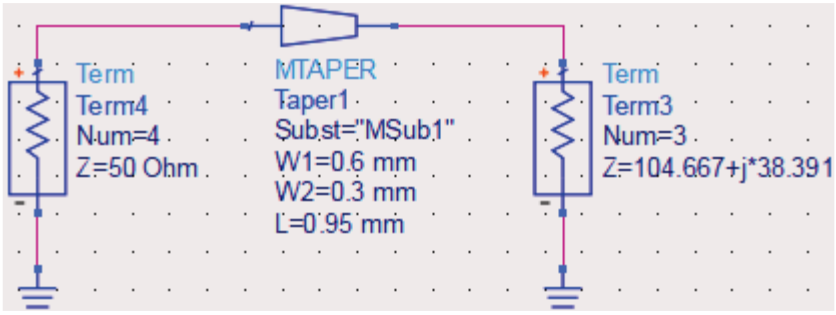
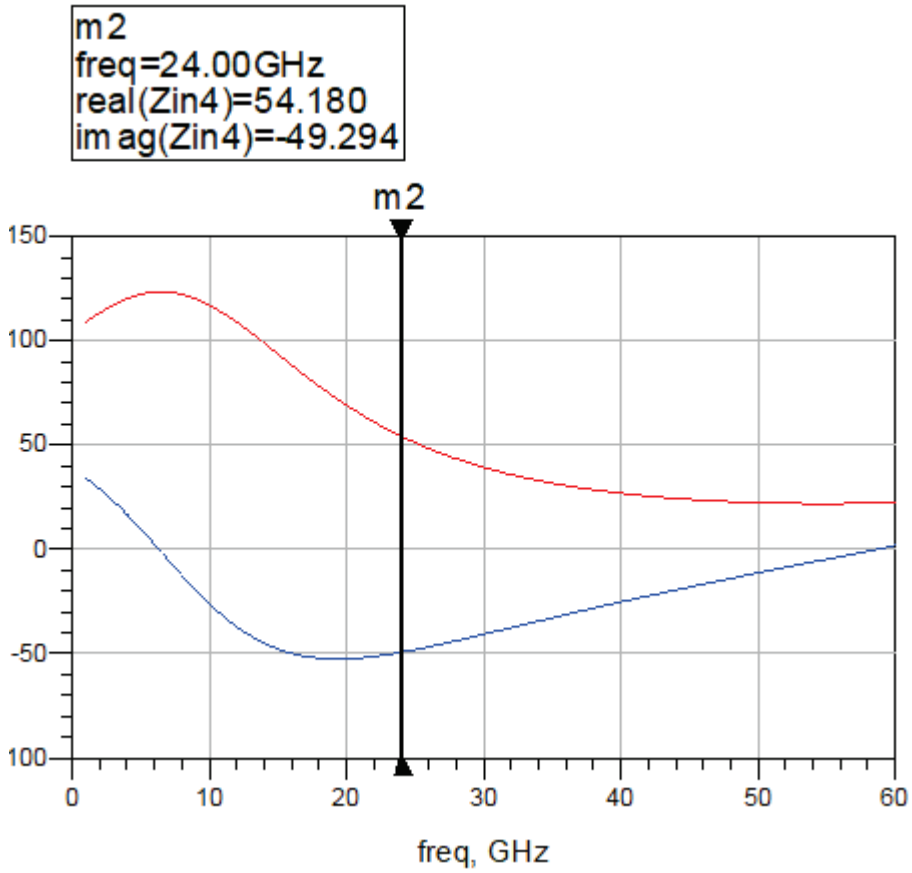
Components of the RX Matching Structures will be discussed in the following sections.

a. Tapered Transformer

By tapering a transmission line, a very broadband impedance match (low VSWR) can be realized over a wide bandwidth, the longer the taper, the wider the frequency band [2].





The tapered transformer transformed the impedance from Z_{RX} =104.667+38.391j Ohm to 54.18-49.294j Ohm.

b. Stepped Impedance Filter

In this application, this filter is mainly used to match the Tapered Transformer's output impedance 54.18-49.294j Ohm to 50 Ohm.