

## SC1894 S-PARAMETER NOTES

The following S-Parameter files were measured at the package leads with SC1894 mounted to Scintera's Evaluation board. See the Figure 1 below.

Reference files names:

- 1) **SC1894\_RFIN.s2p**: 2-port S-Parameters of SC1894, pins 19, 20.  
Port1 of the S-Parameter file corresponds to pin 19(RFINP) of SC1894. Port2 of the S-Parameter file corresponds to pin 20(RFINN) of SC1894. Ports are DC blocked during measurement.
- 2) **SC1894\_RFOUT.s2p**: 2-port S-Parameters of SC1894, pins 8, 9.  
Port1 of the S-Parameter file corresponds to pin 8(RFOUTP) of SC1894. Port2 of the S-Parameter file corresponds to pin 9(RFOUTN) of SC1894. Ports are biased with 1.8V during measurement.
- 3) **SC1894\_RFFB.s2p**: 2-port S-Parameters of SC1894, pins 30, 31.  
Port1 of the S-Parameter file corresponds to pin 30(RFFBP) of SC1894. Port2 of the S-Parameter file corresponds to pin 3(RFFBN) of SC1894. Ports are DC blocked during measurement.

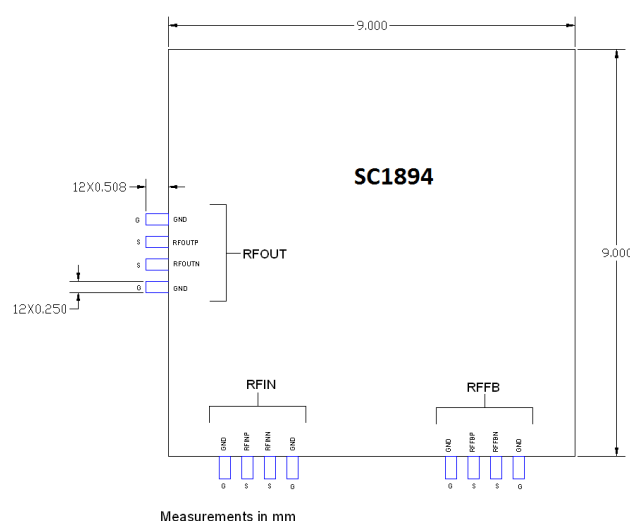


Figure 1: SC1894 RF Ports - Circuit Board Material RO4350, .0133" Thickness, 1oz. Copper Plating

When simulating using these s2p files, an ideal transformer must be used as in Figure 2 to convert the 2-port parameter into 1-port referenced to ground.

## SC1894 S-Parameter Notes

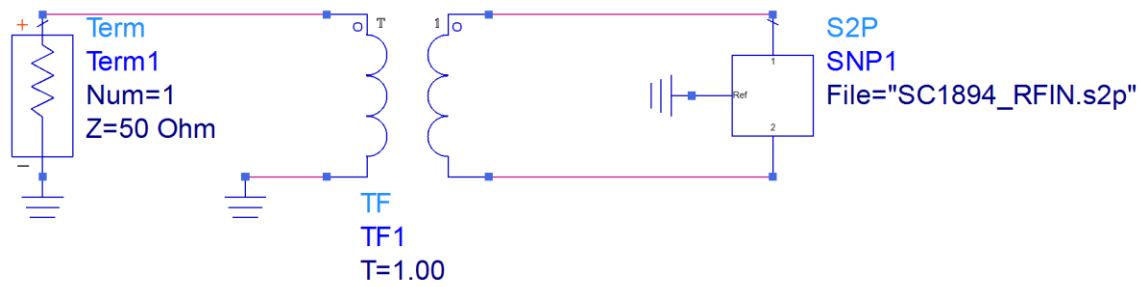


Figure 2: Differential to Single Ended Conversion to Simulate with SC1894 S-Parameters

The Smith Chart in Figure 3 shows the s-parameter traces of SC1894 RF ports as measured in Figure 2.

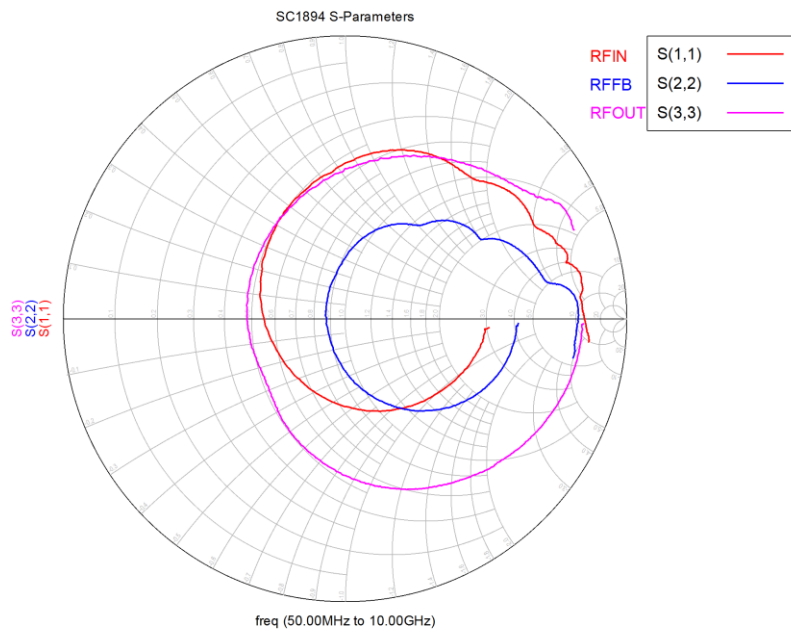


Figure 3: SC1894 RFIN, RFFB and RFOUT Port Impedances