Technical Notes

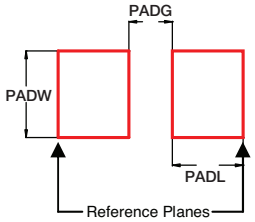
- Two-port S-parameters are measured using a vector network analyzer and on-board probing with calibration referenced to the outside edges of the component pad stack.
- Capacitors are measured in a series microstrip configuration. Models for alternative interconnect configurations (e.g. coplanar waveguide) can be ordered through Modelithics custom services.
- ESR is measured using a 34A Boonton coaxial resonator line.
- Substrates used to extract the models: 10 mil Quartz, 30 mil Rogers 4350B
- Typical range of valid substrate types (substrate height H in mils and dielectric constant Er): 2.6 ≤ H/Er ≤ 8.1.
- Additional information about Presidio capacitors is available at www.presidiocomponents.com

Capacitor Values (pF)

0.33	6.8	56	180
0.68	8.2	82	200
1	16	100	250
1.5	18	120	
4.7	43	140	
5.6	47	160	

All capacitor values represent measurement-based models.

PC Board Footprint

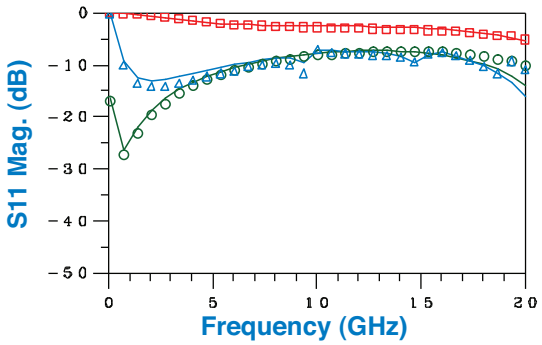


PADL: 0.965
PADW: 1.168
PADG: 0.508

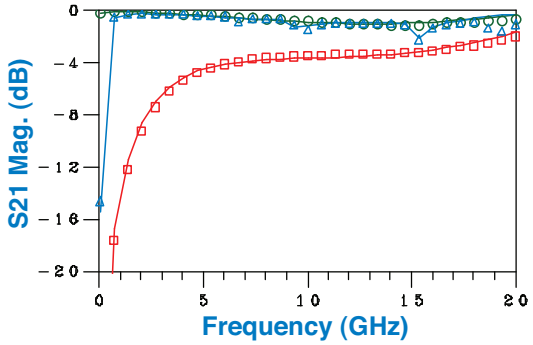
Units in mm

Typical Measured Series 2-port S-Parameter Data Versus Simulated Data

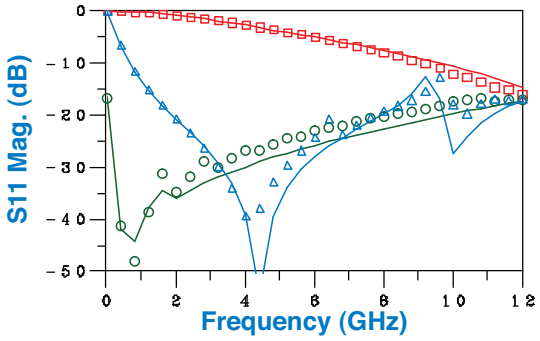
10 Mil Substrate



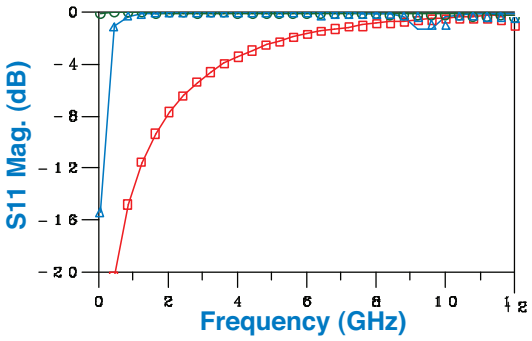
10 Mil Substrate



30 Mil Substrate



30 Mil Substrate



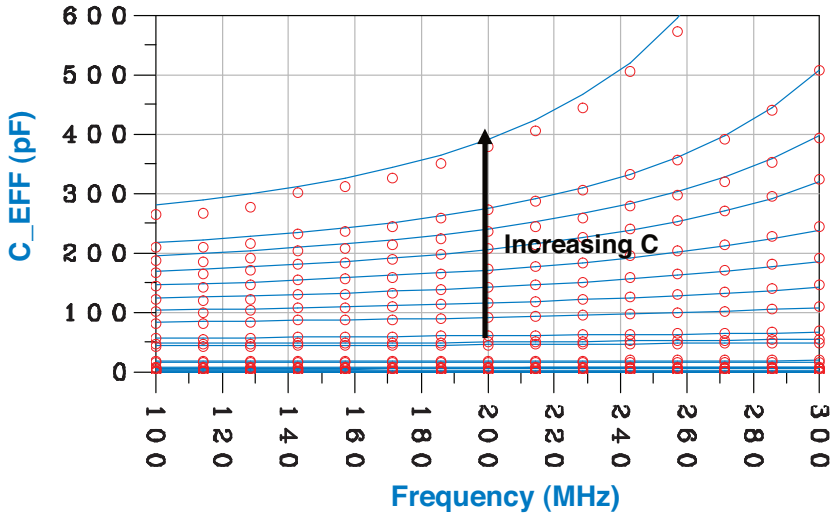
Legend: □ 0.33pF, △ 6.8pF, ○ 250pF, Solid line = Model data, Symbol = Measured data

Modelithics® http://www.modelithics.com/mvp/Presidio

PRESIDIO COMPONENTS, INC.
7169 Construction Court, San Diego, CA 92121 • Tel: 858-578-9390 • Fax: 800-538-3880 or 858-578-6225
www.presidiocomponents.com • info@presidiocomponents.com

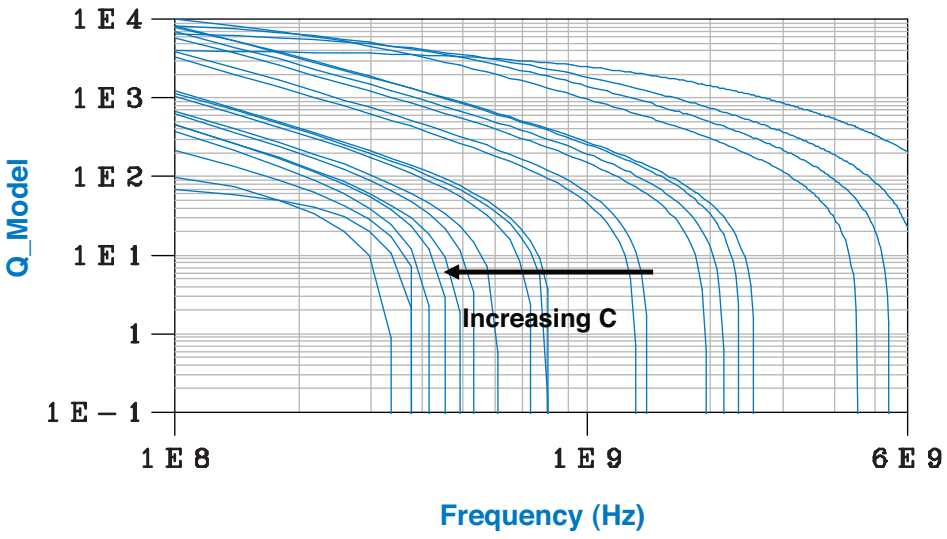
FREE MODEL DOWNLOAD

Effective Capacitance Data



Legend: **Blue** solid lines – Model response on 30mil Rogers 4350B substrate for capacitance sweep
Red circles – Measurement data on 30mil Rogers 4350B substrate for capacitance sweep

Simulated Q-Factor



Legend: **Blue** solid lines – Model response on 30mil Rogers 4350B substrate

Modelithics® http://www.modelithics.com/mvp/Presidio

PRESIDIO COMPONENTS, INC.
7169 Construction Court, San Diego, CA 92121 • Tel: 858-578-9390 • Fax: 800-538-3880 or 858-578-6225
www.presidiocomponents.com • info@presidiocomponents.com