

# RF Basics Seminar



**September 28, 2022 | 8:30 AM - 12:00 PM**

**Hampton Inn & Suites Irvine - Orange County Airport - Shore Ballroom  
2192 Dupont Dr. Irvine, CA 92612**

**Who should attend:** Persons with an understanding of electronics theory and an interest in RF basics

## Agenda

**8:30 AM - 8:40 AM**

**Registration/Sign In**

**8:40 AM - 12:00 PM**

**Program**

- **Lumped Elements vs Frequency**
  - Shunt, Series, Parallel RLC networks
- **Impedance**
- **Time Domain vs Frequency Domain**
- **Transmission Line Modeling**
  - Time & Frequency Domain Behavior
  - $Z_0$
- **Lumped Element vs Electromagnetic Modeling of Transmission Lines**— Wavelength concepts & signal behaviors
  - Assumptions for  $< 1/4$  wavelength
  - Accounting for  $> 1/4$  wavelength
- **Reflection Coefficient Concepts and Applications**
- **Basic**
  - Lossless = simpler math, reduced accuracy
  - Lossy = computation intense, higher accuracy

**12:00 PM - 1:00 PM**

**Lunch Provided** *(Please Register at Link Below)*

FormFactor, Inc.  
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Ward Davis Associates  
Redondo Beach, CA  
310 643-6977

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# RF Wafer Probing Seminar



**September 28, 2022 | 12:00 PM - 4:30 PM**

**Hampton Inn & Suites Irvine - Orange County Airport - Shore Ballroom  
2192 Dupont Dr. Irvine, CA 92612**

**Who should attend:** Persons with an understanding of RF and an interest in RF wafer probing and calibration

## Agenda

**12:00 PM - 1:00 PM**

**Lunch Provided** *(Please Register at Link Below)*

**1:00 PM - 1:10 PM**

**Registration/Sign In**

**1:10 PM - 4:30 PM**

**Program**

- **Introduction to On-wafer Probing**
  - What is an RF Probe
  - How to Choose the Right Probe
- **On-Wafer Calibration**
  - S-Parameter Basics
  - Overview of Calibration Methods, How to Calibrate
  - Introduction to WinCal
- **On-Wafer Measurement Verification**
  - How Good is My Calibration?
- **Additional Considerations**
  - Design for Testability
  - De-embedding
  - Temperature Testing with RF Probes
  - Probe Cleaning

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