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India Semiconductor Workforce Development Program (ISWDP)
Custom Module offered by Rohde & Schwarz

January 11, 2025 | 11 AM-1.30 PM
Custom Module on Advanced Electronic Design for Reliable Operation: Power Integrity, Signal Integrity, and RF Performance Testing by Rohde & Schwarz

January 12, 2025 | 11 AM-12 PM : Custom Module Test

Objective of the Module: To provide a concise yet comprehensive overview of ensuring reliable operation in electronic designs, focusing on power integrity, signal integrity, and RF performance testing. The course will cover critical measurement techniques, component characterization, and RF testing relevant to emerging technologies.

Module Contents:

1. Introduction to Power Integrity (30 minutes)

Overview of Power Integrity
- Importance of power integrity in electronic designs
- Impact of decreasing supply voltages on power rail qualification

Measurement Techniques
- Making reliable power integrity measurements using digital storage oscilloscopes
- Using probes effectively for accurate measurements

Impact on Signal Integrity
- How power integrity influences signal integrity
- Strategies to address measurement challenges

2. Component Characterization and Measurement (30 minutes)

Basics of Component Characterization
- Introduction to probe stations and Vector Network Analyzers (VNAs)
- Key parameters for RF component characterization

Measurement Techniques with VNAs
- Measuring S-parameters, gain, time delay, and group delay
- Correcting intrinsic errors in VNA measurements

3. RF Performance Testing (30 minutes)

Essential RF Testing Parameters
- Measuring output power, calibration, and spurious emissions
- Understanding receiver sensitivity and selectivity
- Error Vector Magnitude (EVM) and its relevance

Testing for Emerging Technologies
- Specific considerations for 5G and 6G RF performance testing

4. Practical Applications and Q&A (30 minutes)

Hands-on Tips and Tricks
- Best practices for accurate measurements and troubleshooting

Case Studies
- Brief overview of real-world scenarios and solutions

Q&A Session
- Addressing participant questions and clarifications

CLICK TO REGISTER
https://iswdp.registeryourseat.in/index.php

This module, along with its certification, is available free of charge exclusively to Cohort 1, 2, and 3 participants of ISWDP. To enroll, participants must click on the registration link, log in with their credentials, and choose the Custom Module. The registration deadline is December 29th, 2024. Please note that the meeting link will be shared only after successful registration.

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