high tech institute

Solid State generated RF and applications

Price:	€ 1,650 excl. VAT
Duration:	3 consecutive days
Contact:	training@hightechinstitute.nl, +31 85 401 3600

Intro

Solid State generated RF offers an unprecedented control over the RF signal via feedback of power and energy levels. This control gives the facility of predictive behavior and reproducibility. A fast and effective reaction is now possible to changing load conditions. This gives efficient energy delivery and fast shutdown. Other advantages are: reliability based on solid state semiconductor technology, low-voltage electronics, small form factor and flexible hardware partitioning, and electronics cost base enabled.

This course gives an introduction to the application of SS RF. Designers of SS RF systems themselves need to attend a subsequently advanced course.

Objective

After the course, the participant will:

- know and understand the possibilities and restrictions of the Solid State RF technology;
- know and understand the preconditions of the specifications of SS RF systems;
- be able to write a specification of a SS RF system;
- be able to discuss the characteristics of a SS RF system with system suppliers;
- have sufficient knowledge to join a SS RF design team;
- be able to team-up a SS RF organization (regarding the SS RF knowledge);
- be able to control the transition of a company (regarding the SS RF knowledge) from one based on classical RF systems to one based on SS RF.

Intended for

Engineers, system architects, system designers, technical managers and product developers involved with residential and / or industrial heating / cooking applications. Engineers involved with the application of Solid State based RF technology, with the transition of classical RF systems to Solid State based RF systems, with the transition of conventional heating systems to Solid State based heating systems. Designers of Solid State RF amplifiers learn to understand and motivate the specification of SS RF amplifiers.

Education: At least BSc in a technical discipline as Electronics / Physics / Chemical Technology (Microwave Chemistry)

Methods

Lessons supported by practical demonstrations (hardware and simulation), hands-on and exercises / quiz. Course notes.

Certification

Participants will receive a High Tech Institute course certificate for attending this training.

Course leader

Hans Vink MSc

Trainers

Klaus Werner

** Prices are subject to change. Price correction will be applied at the end of the year.*

Program

Discussed topics are:

- RF safety
- How to handle RF
    - How to interconnect
    - How to measure power, use instruments
- Architecture
    - RF amplifier
    - Gain, efficiency
    - which power, how to interconnect and combine
    - which technologies and how and for what to use
- Which frequencies for what applications, consequences
    - Source – match box – application
- Simulation: relation with the real world
- RF: interaction with matter
    - Refraction, reflection, diffraction versus penetration depth
    - Temperature dependency of physics constants of matter
- RF System flow
- Demonstrations