

Item No.: SO4204-9U

Course Introduction to microwave technology

Includes:

- 1 experiment card X-Band-measurement interface: operational frequency 8,0-9,9 GHz, logarithmic detection, dynamic range up to 50 dB, resolution 16 bit
- High quality waveguides:
 - Gunn oscillator with high precision frequency tuning micrometer screw
 - isolator
 - variable attenuator
 - slotted line
 - line displacement record
 - 3-screw transformer
 - waveguide terminator
 - waveguide adapter
 - waveguide short
 - horn aerial 10 dB
 - Stands and connecting cables
 - Aluminum storage case
 - Labsoft-Browser and course software

Microwave source

- Gunn oscillator
- Frequency 8,0..9,9 GHz, ultra stable and maintenance-free
- Safety first - low-power emission and measurement only emission
- Overvoltage protection

Receiver

- X-Band-LNC, frequency range 8...10 GHz
- High accuracy measurements with sensitivity up to -75 dBm
- Real-time frequency measurement of 8...10 GHz signals
- Internal gain approx. 16 dB

Course contents:

- Characteristics of electromagnetic waves
- Gunn oscillator
- LNC receiver
- Recording of current-voltage characteristics
- Transmission line theory and line quantities of unit length
- Wave propagation in waveguides
- Standing waves, shorted waveguide, reflection and matching
- SWR
- Power loss and thermal load
- Measurement of wave distribution along the waveguide with the slotted measurement line
- Propagation of TE and TM waves
- Waveguide dimensions and operating frequency
- Dielectrics in waveguides
- Course duration 4.5 h approx.



