

Advanced Module “Transistors”

Course Goal

Learning to understand simple circuits with transistors and how to dimension the required components.

Course Contents

The transistor as a switch

- > Controlling the transistor
- > Residual currents, block voltages and breakdown voltages
- > Saturation state and saturation voltages
- > Transistor power loss
- > Switching times
- > Switching inductive and capacitive loads
- > Darlington circuit
- > Quasi complementary circuit

Multivibrators

- > Bistable multivibrator
- > Astable multivibrator
- > Monostable multivibrator
- > Schmitt trigger

The transistor as an amplifier

- > Basic amplifier circuits
- > Low signal behaviour of basic circuits
- > Current and voltage negative feedback
- > Alternating current amplifier
- > Coupling of multi-stage amplifiers
- > Low frequency preamplifier
- > Low frequency push-pull output amplifier

Hands-on exercises

- > Various measurement exercises on self-built circuits
- > Computer-supported documentation of the various measurement exercises (lab reports)

Target Group / Prior Knowledge

People who have taken the “Basic Module Transistors” or have equivalent prior knowledge.

Course Length

60 instructional units

Course Price

Available on request

Course Location:

Kapsch Partner Solutions GmbH, Johann-Hoffmann-Platz 9, 1120 Vienna or
at customer site, by agreement

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