

SEC TECH-CLASS

October 16 to 20, 2023



THE ESSENTIALS OF THERMAL FOR ELECTRONICS

DETAILS

- From 9:00 a.m. to 12:30 p.m., that to say 17H30 of training course over five half-days
- By videoconference
- Minimum number of registrations: 05
- Maximum number of registrations: 12
- Language: French
- Registration closure: October 06, 2023

EDUCATIONAL GOALS

- Acquire precise knowledge of the physical phenomena involved in heat transfer within electronic devices
- Know the different technical heat removal processes in these devices and know how to choose them
- Know how to correctly size the thermal process(es) implemented in the designs of electronic or electrical equipment through simulation

TARGET AUDIENCE

- Electronic and mechanical technicians and engineers

PREREQUISITE

- Mathematics basics baccalaureate level, use of a spreadsheet
- Some theoretical notions require a mathematical level of second year university to be fully assimilated
- General knowledge of electronics, no initial thermal knowledge is necessary

REGISTRATION FEES

- Non-member of the SEC: CHF 2'000.- / person
- SEC member: CHF 1'000.- / person
- Payment term: in advance

TRAINER

- Philippe GUILLEMET, Director of Thermodel-rd, thermal expert in a design office specializing in electronics, former teacher-researcher at the University of Nantes



DESCRIPTION

1. Modes of heat transfer
 - Transfer by conduction
 - Transfert par convection
 - Transfert par rayonnement
2. Heat removal devices
 - Thermal of interfaces, films and pastes
 - Conventional cooling methods
 - Sophisticated cooling methods
 - Critical and comparative analysis of methods, tips for use, pitfalls to avoid
3. Thermal of the PCB
 - Thermal of tracks on PCB PCB
 - Thermal of components on PCB
4. Methods for calculating and simulating heat transfers
 - Thermal sizing method
 - Thermal analysis of a device and simplification
 - Elementary analytical calculation of sizing
 - Critical analysis of the result and the search for optimization
 - Application exercises
 - Simulation methodology
5. Measurement of thermal and fluid quantities
 - Temperature measurement
 - Other thermophysical measurements
6. Forms and digital data
 - Calculation tools
 - Data tables
7. Practical case studies
 - Free discussion around the different situations proposed by the trainees

ONLINE REGISTRATION

By following [THIS LINK](#)

Or by scanning the QR-code:

