

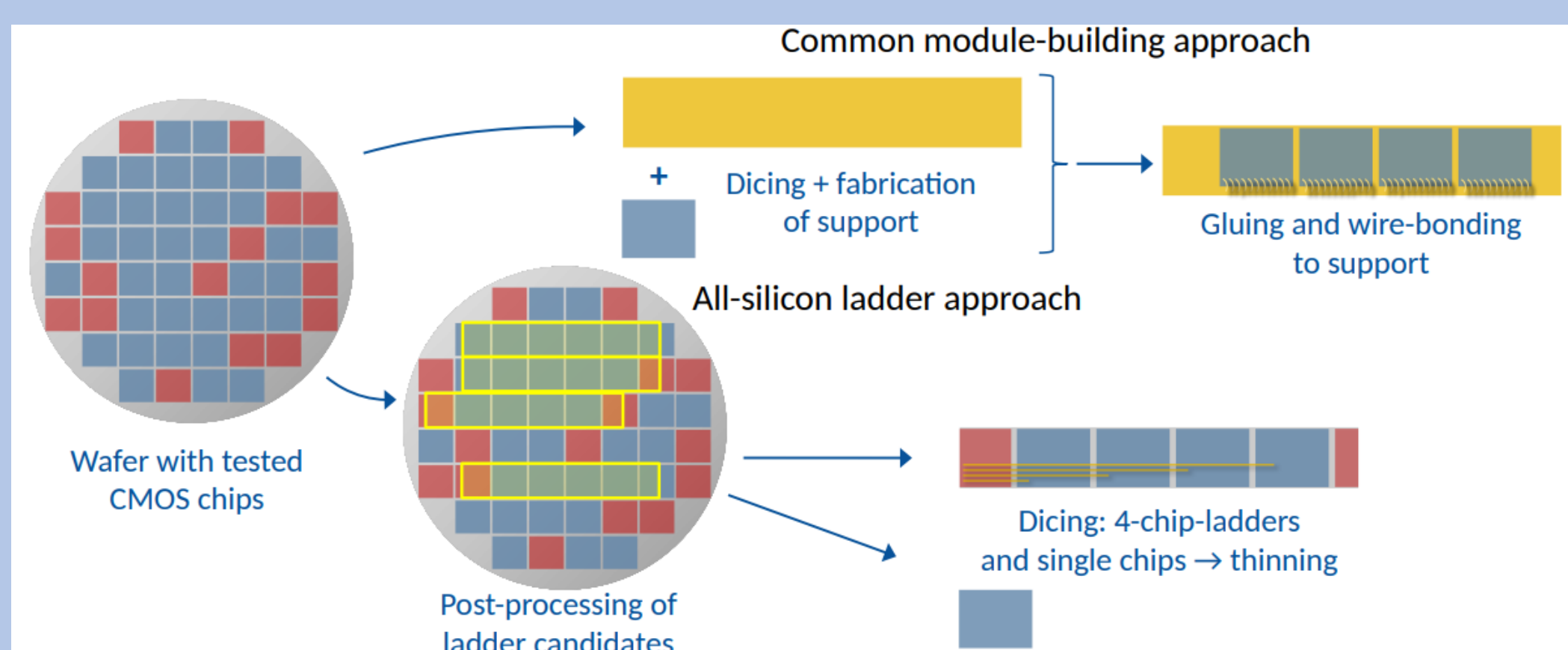
Electrical simulation and S-parameter measurements of all-silicon CMOS monolithic pixel modules

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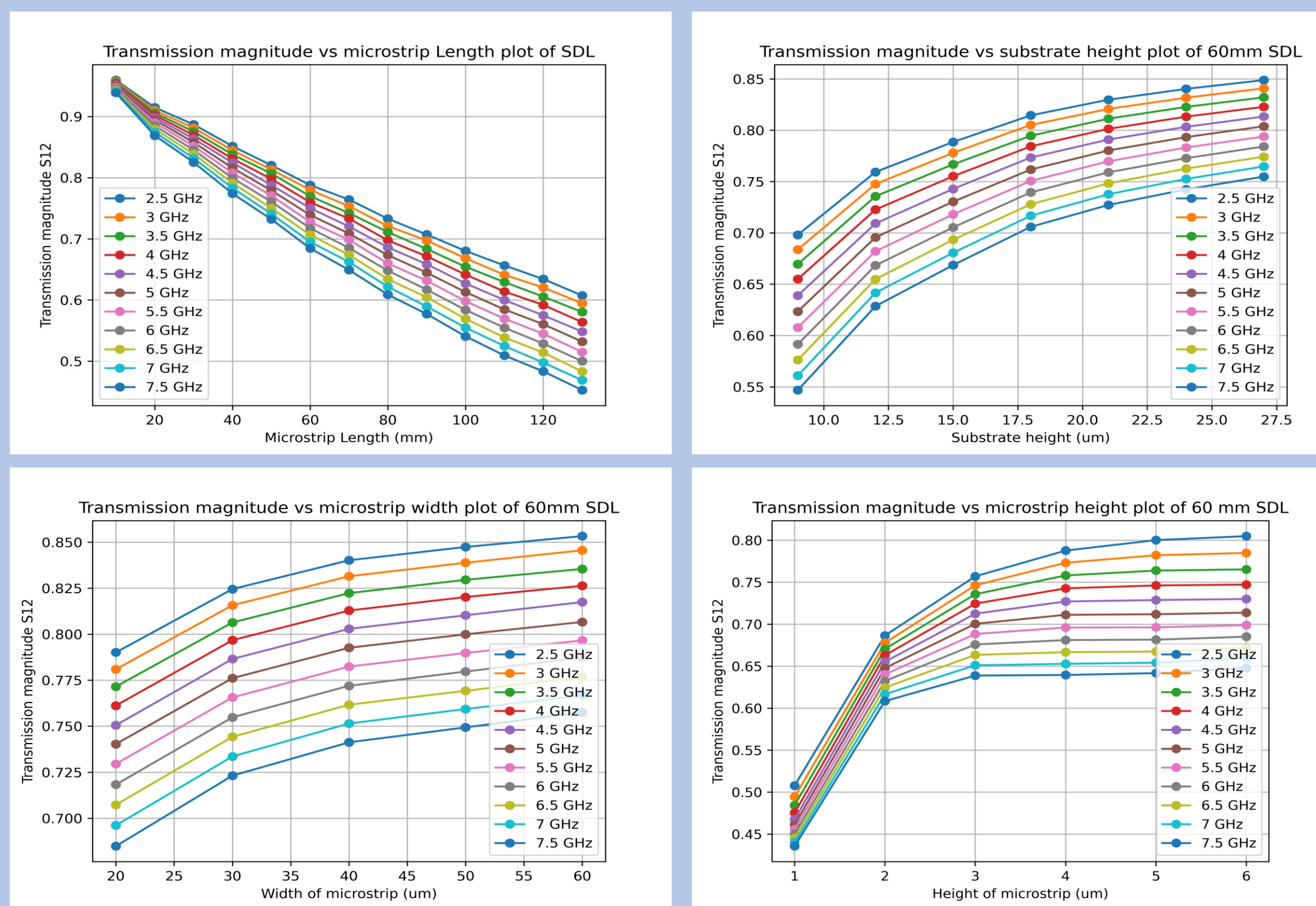
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Introduction

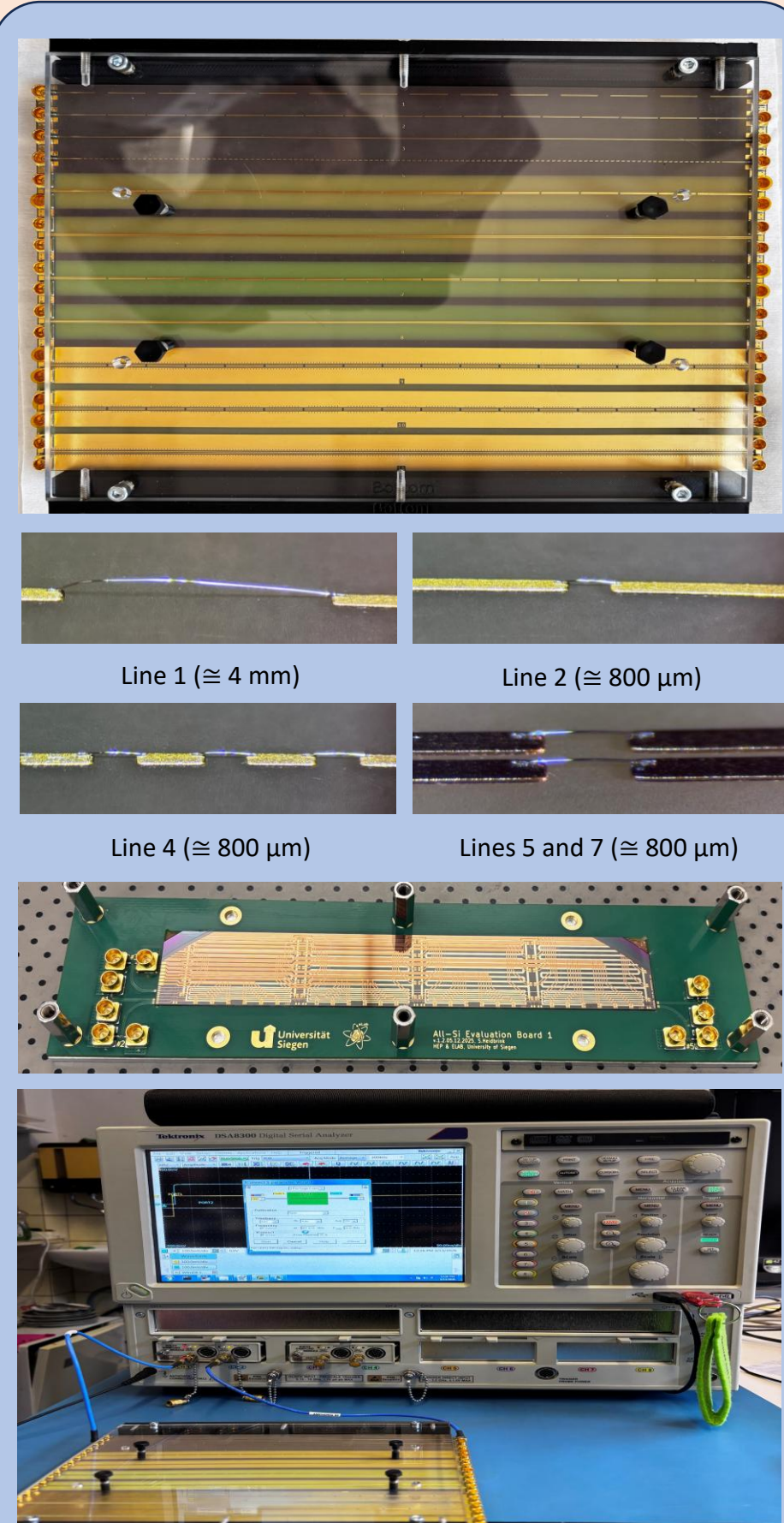
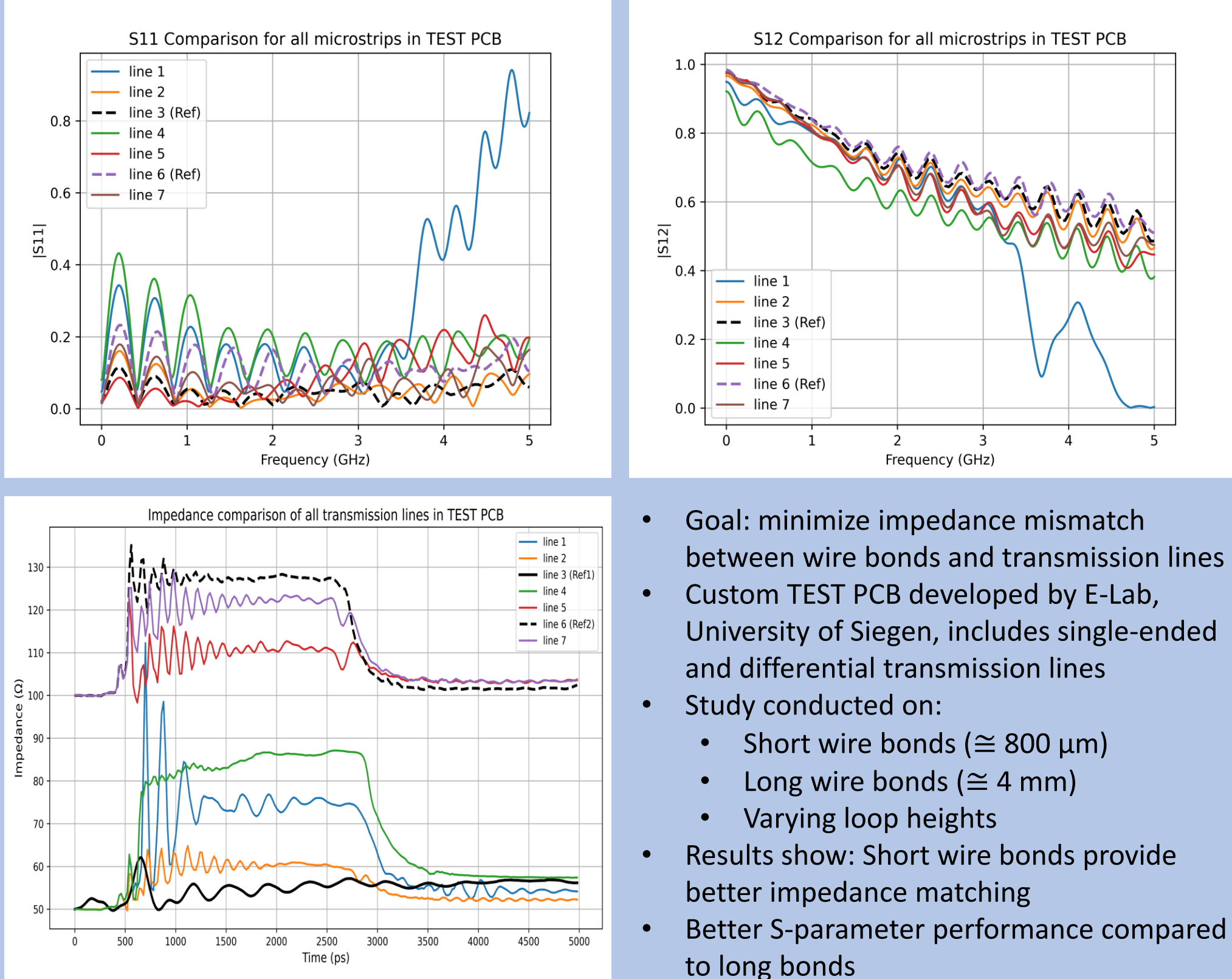


- Monolithic active CMOS pixel sensors, like OBELIX pixel sensors, are used in a self-supporting all-silicon ladder
- In post-processing, the redistribution of metal layers (RDL) technique is used
- Izm structure of the all-silicon ladder + RDL demo. with resistive heaters instead of sensor chips
- Resistive heaters are being used to study the thermal properties of all-silicon modules
- RDL demo. is being used to study the electrical performance of the signal and data interconnections at high transmission speeds

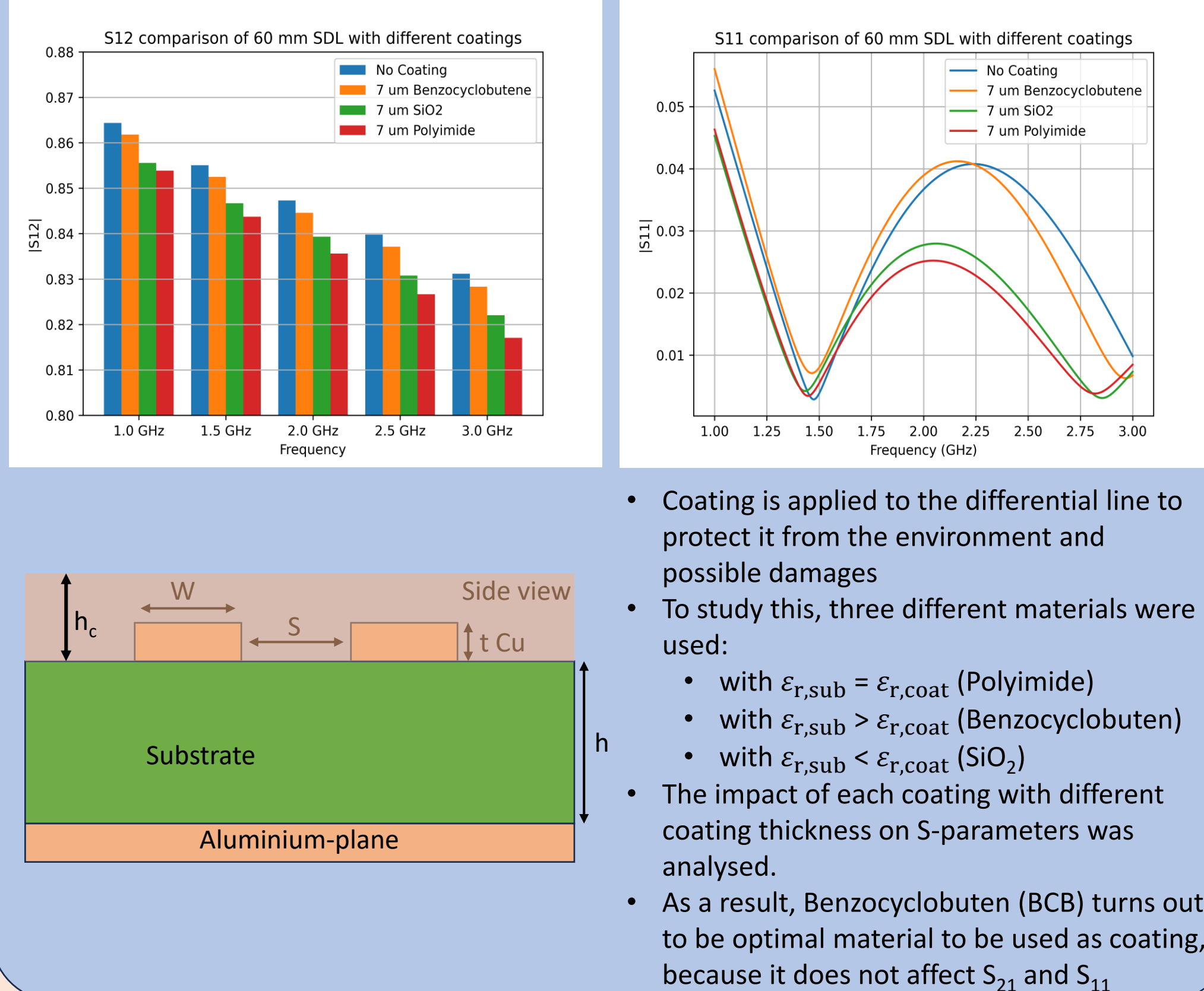
Simulations of microstrip parameters



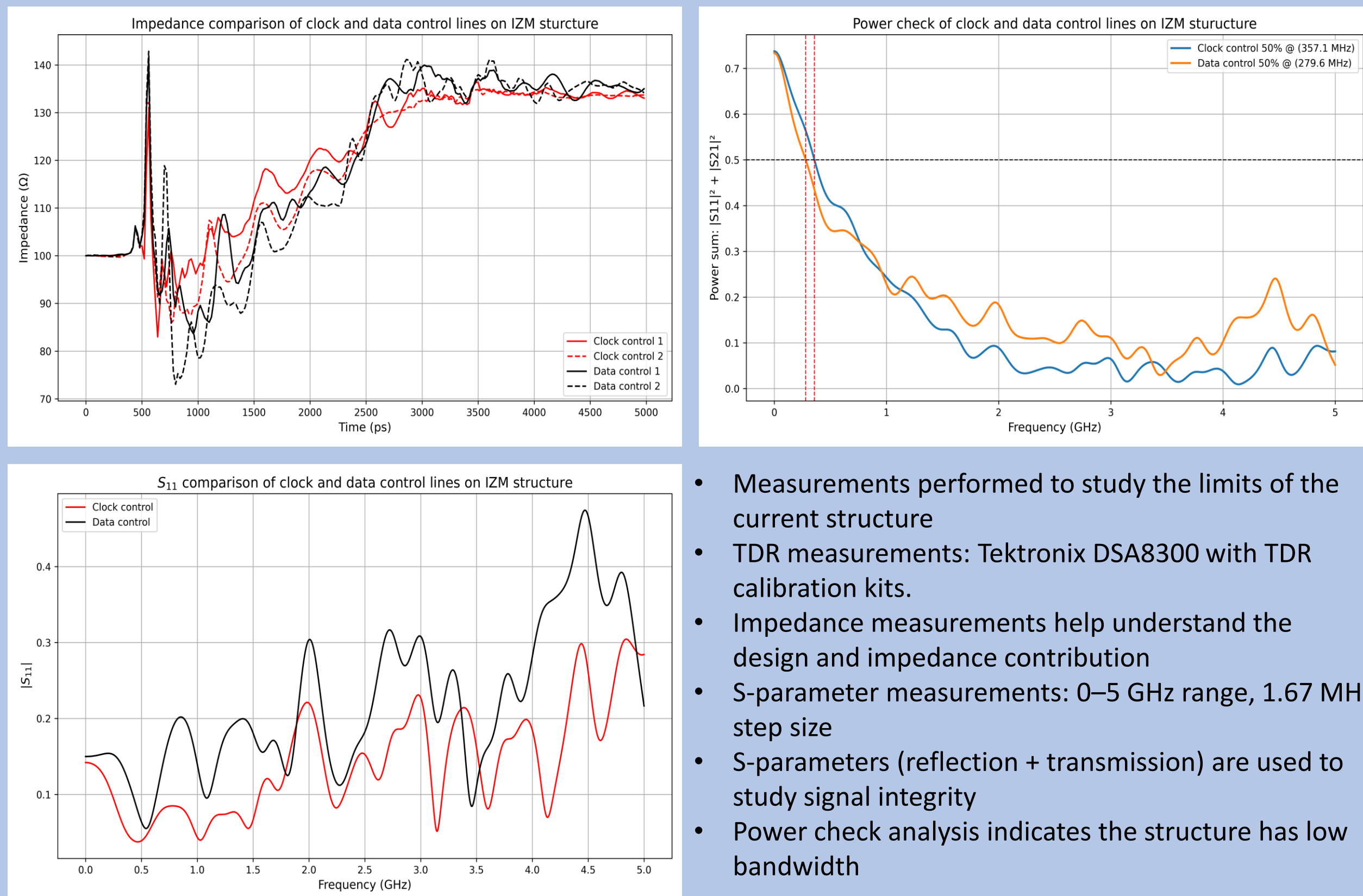
Wire bonding study



Simulations of coating study



TDR measurements of the all-silicon module



Simulations of the all-silicon module

