

# Assessment of ETSOI MOSFET Modeling with BSIMSOI

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# Outline

- Background and motivation
- Brief overview of BSIMSOI
- Model scalability checks
- ETSOI modeling example with BSIMSOI
- Conclusions



# Conclusions

- Can BSIMSOI be used for ETSOI designs?
  - YES!
  - Width/length/ $V_{DD}$ /temperature scalability for DC/AC adequately covered
  - Benchmarking circuits fully functioning
- Areas of improvement for BSIMSOI or ETSOI dedicated models
  - Treatment of undoped channel
  - Predictability over  $T_{si}$ ,  $T_{box}$ ,  $N_{sub}$ ,  $T_{ox}$

