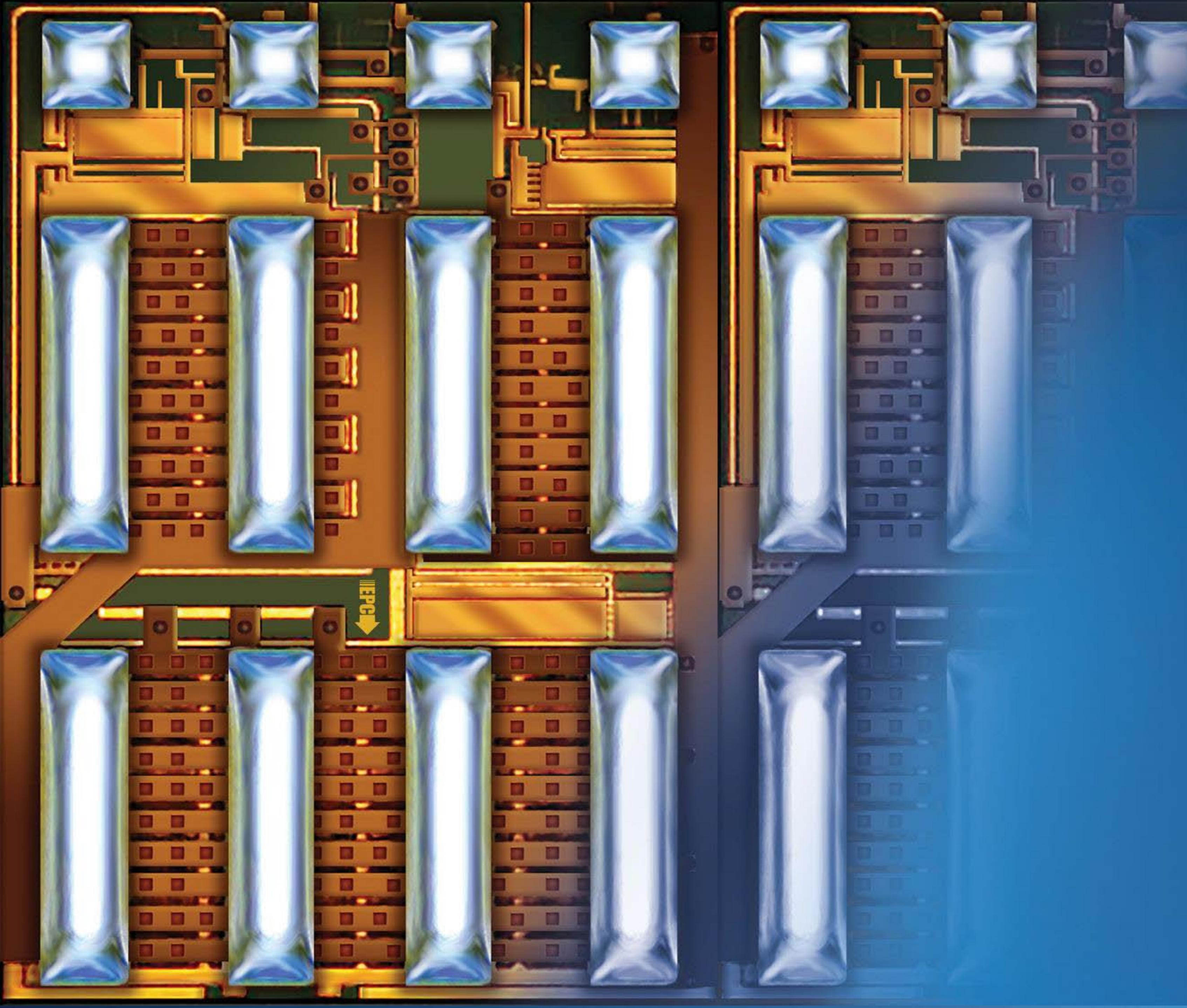


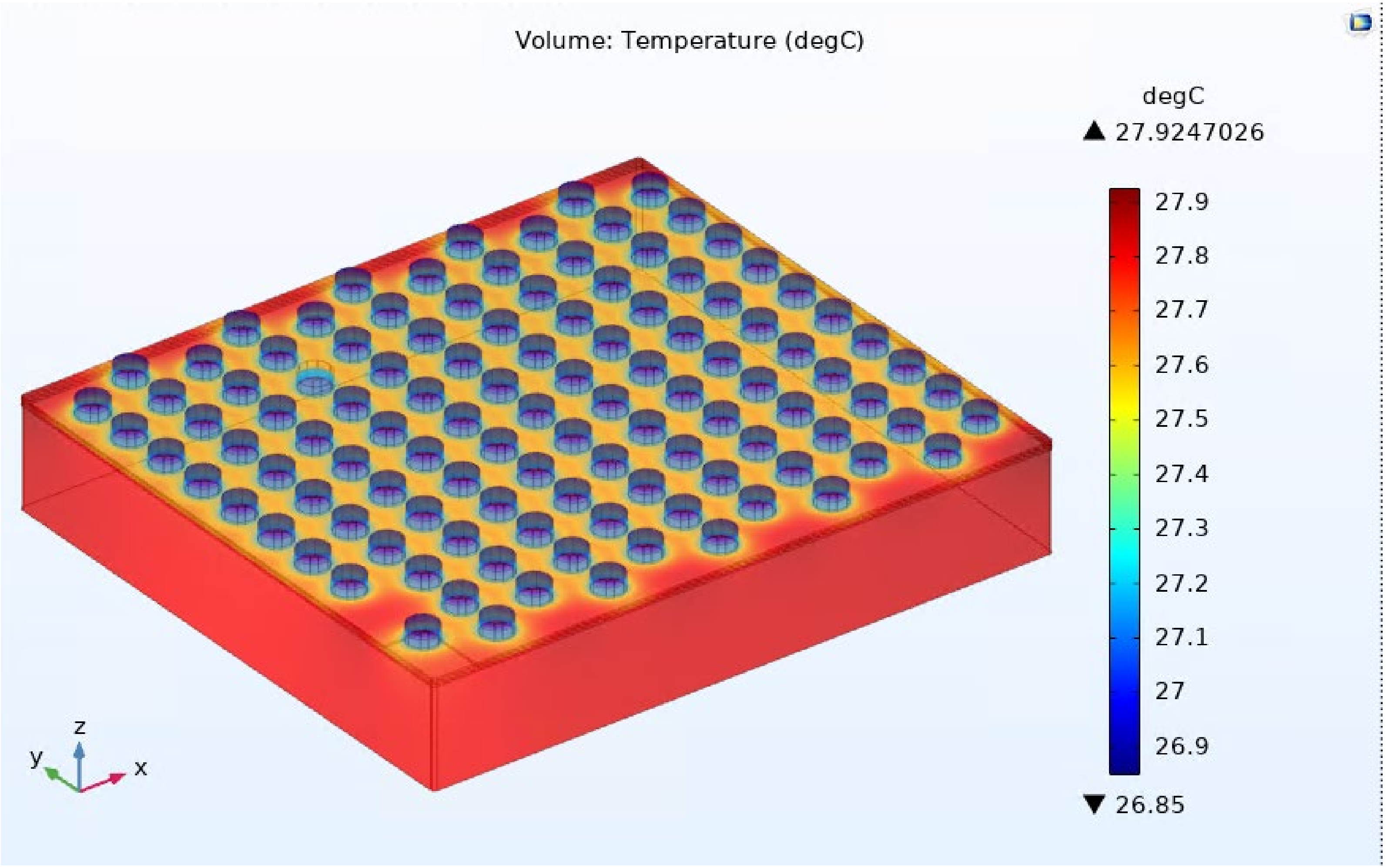
Thermal Model of EPC2091

EPC2091 FEA thermal simulation

- The thermal model applies to EPC2091.
- A power dissipation of 1 W in the device active area is assumed.
- Finite element analysis (FEA) thermal simulations
  - $R_{\Theta JB}$ and $R_{\Theta JC}$ are obtained by stationary simulations.
  - $Z_{\Theta JB}$ and $Z_{\Theta JC}$ are obtained by transient simulations.
- R-C thermal model is generated.

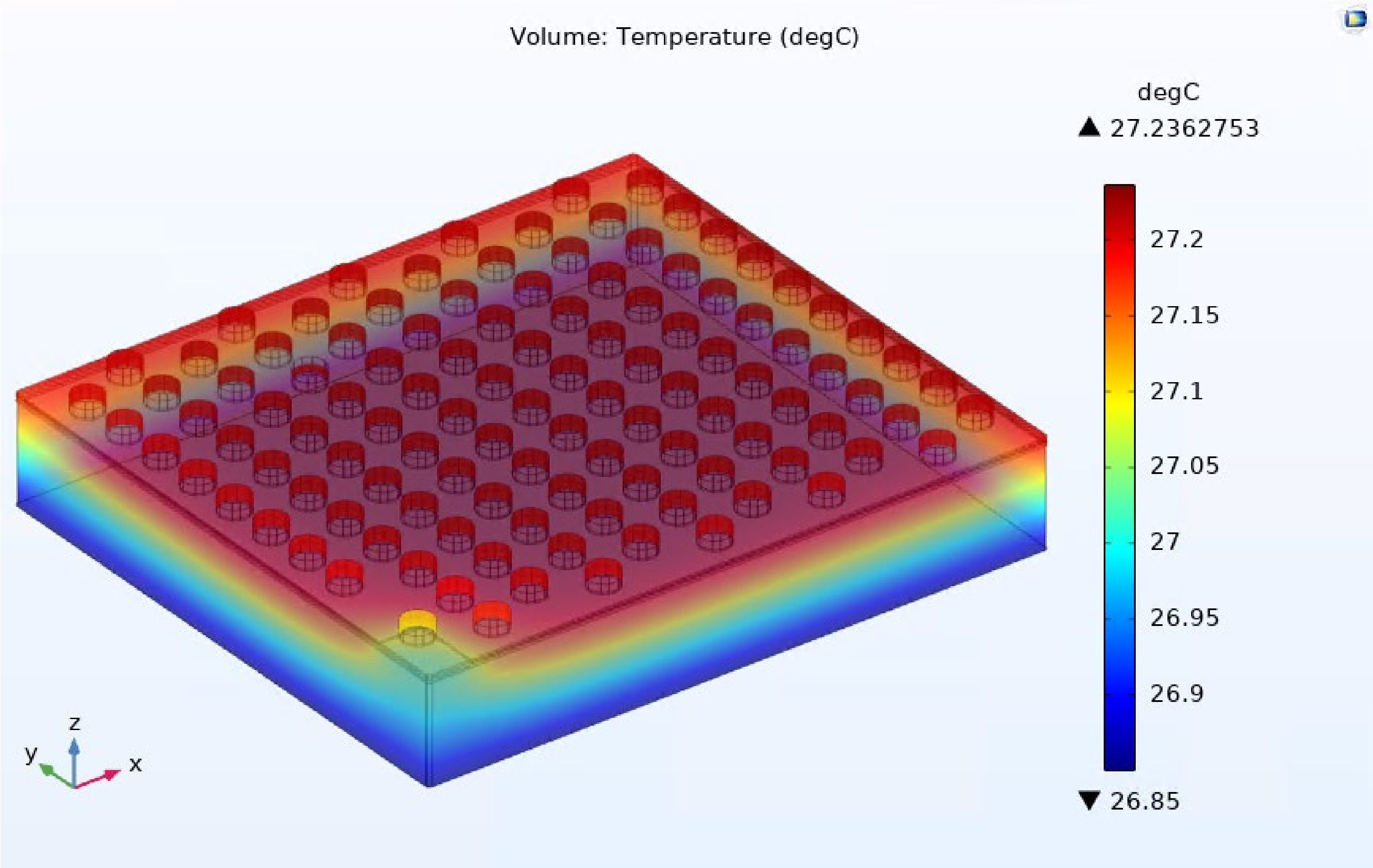
Steady-state $R_{\Theta JB}$

- Example: P = 1 W

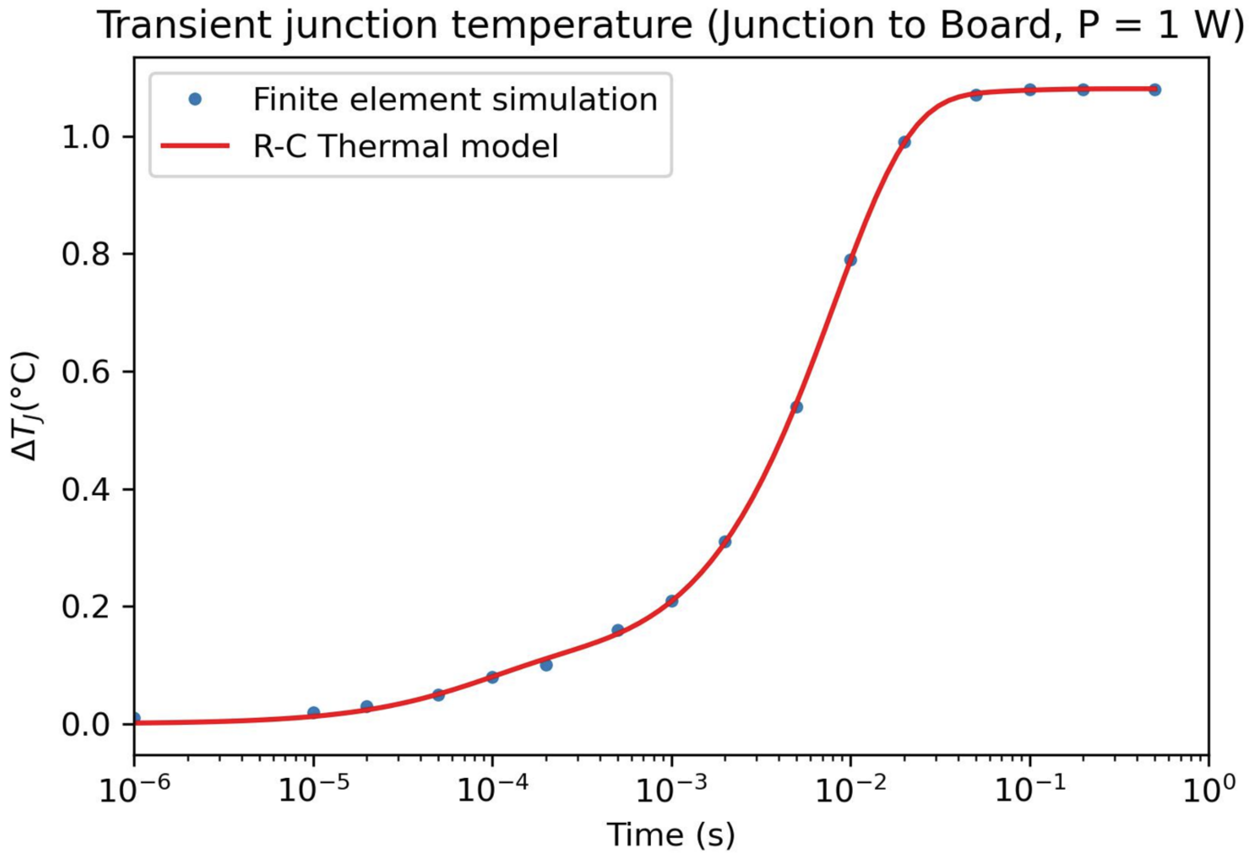


Steady-state $R_{\Theta JC}$

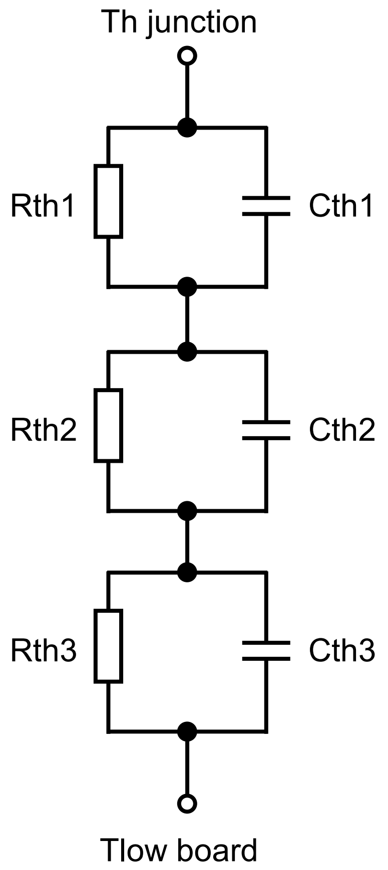
- Example: P = 1 W



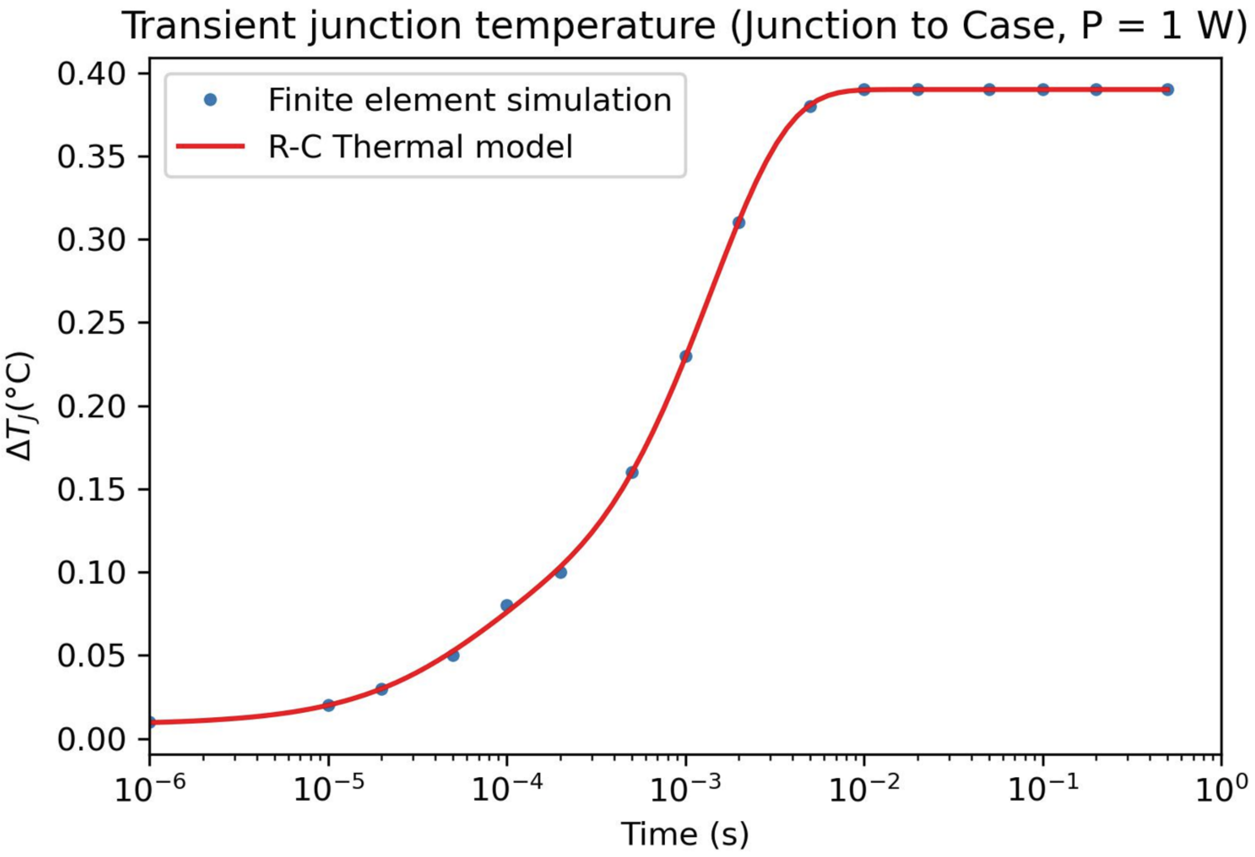
$Z_{\Theta JB}$ R-C thermal model



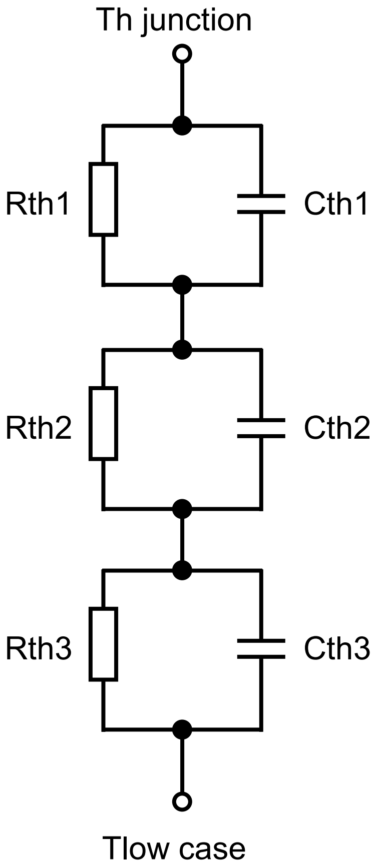
Model Parameter	Value	Unit
Rth1	1.59E-02	°C/W
Rth2	9.44E-02	
Rth3	9.70E-01	
Cth1	3.34E+00	J/°C
Cth2	8.33E-04	
Cth3	8.29E-03	



$Z_{\Theta JC}$ R-C thermal model



Model Parameter	Value	Unit
Rth1	8.34E-03	°C/W
Rth2	5.19E-02	
Rth3	3.30E-01	
Cth1	1.36E-06	J/°C
Cth2	9.74E-04	
Cth3	4.24E-03	



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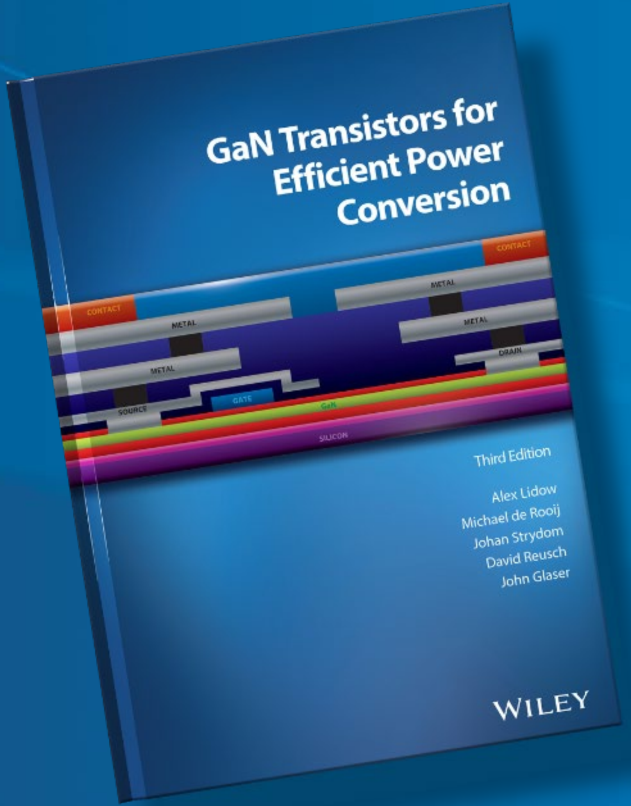
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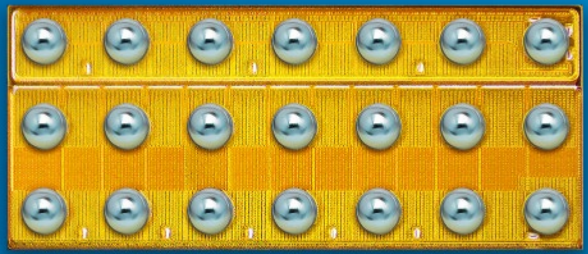

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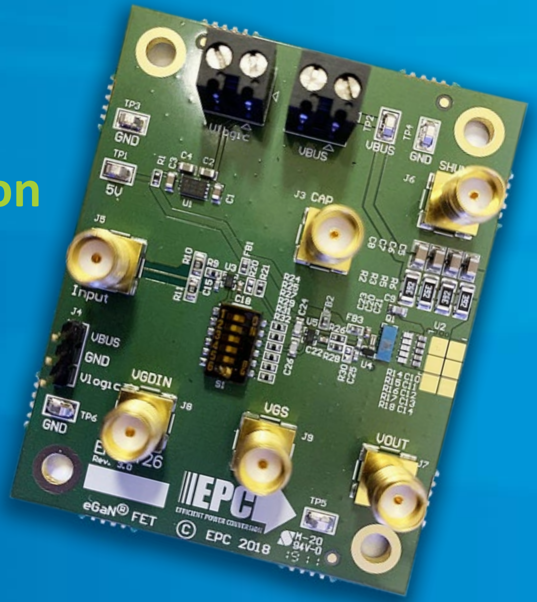
Evaluation Kits



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