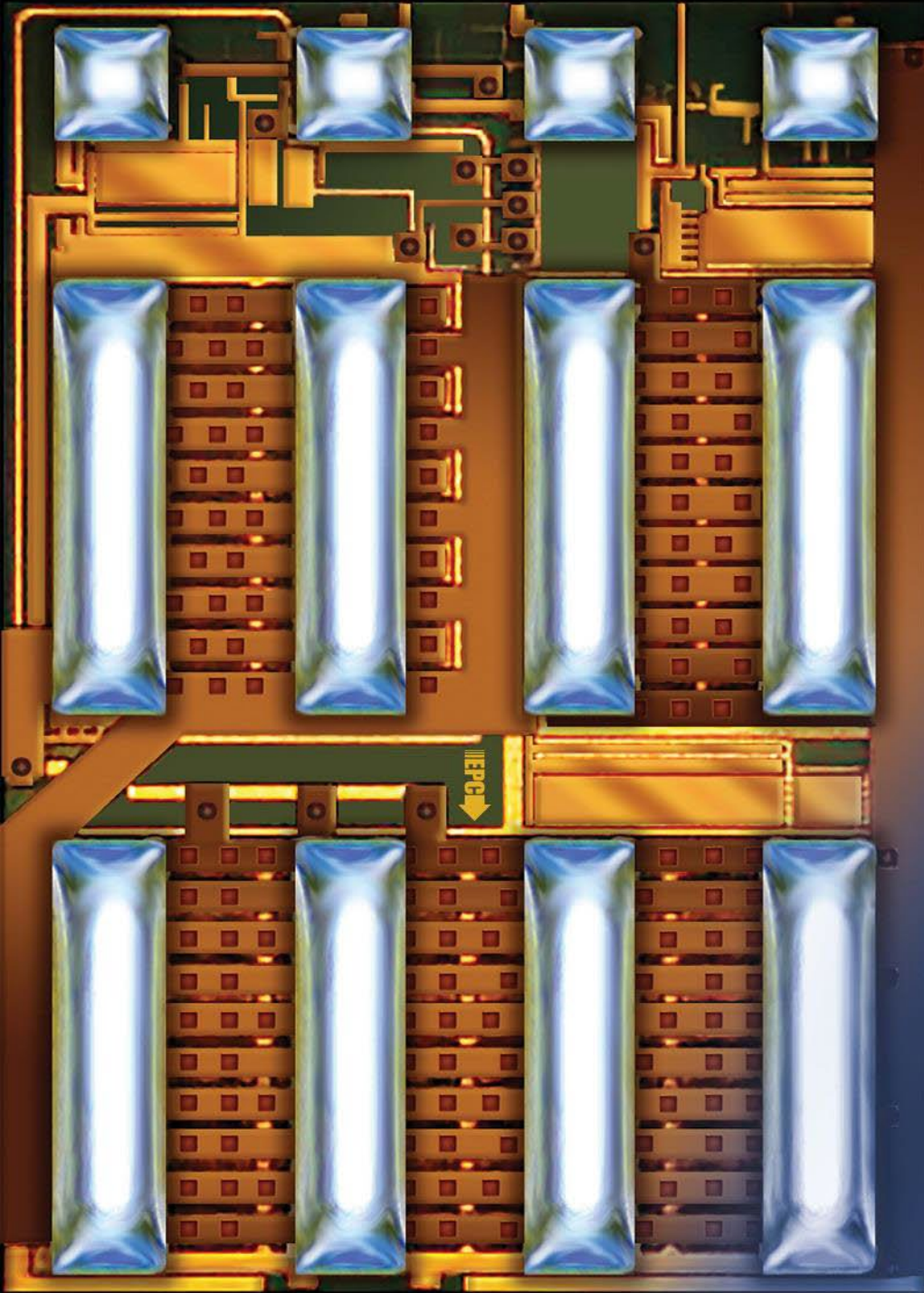




Thermal Model of EPC2375



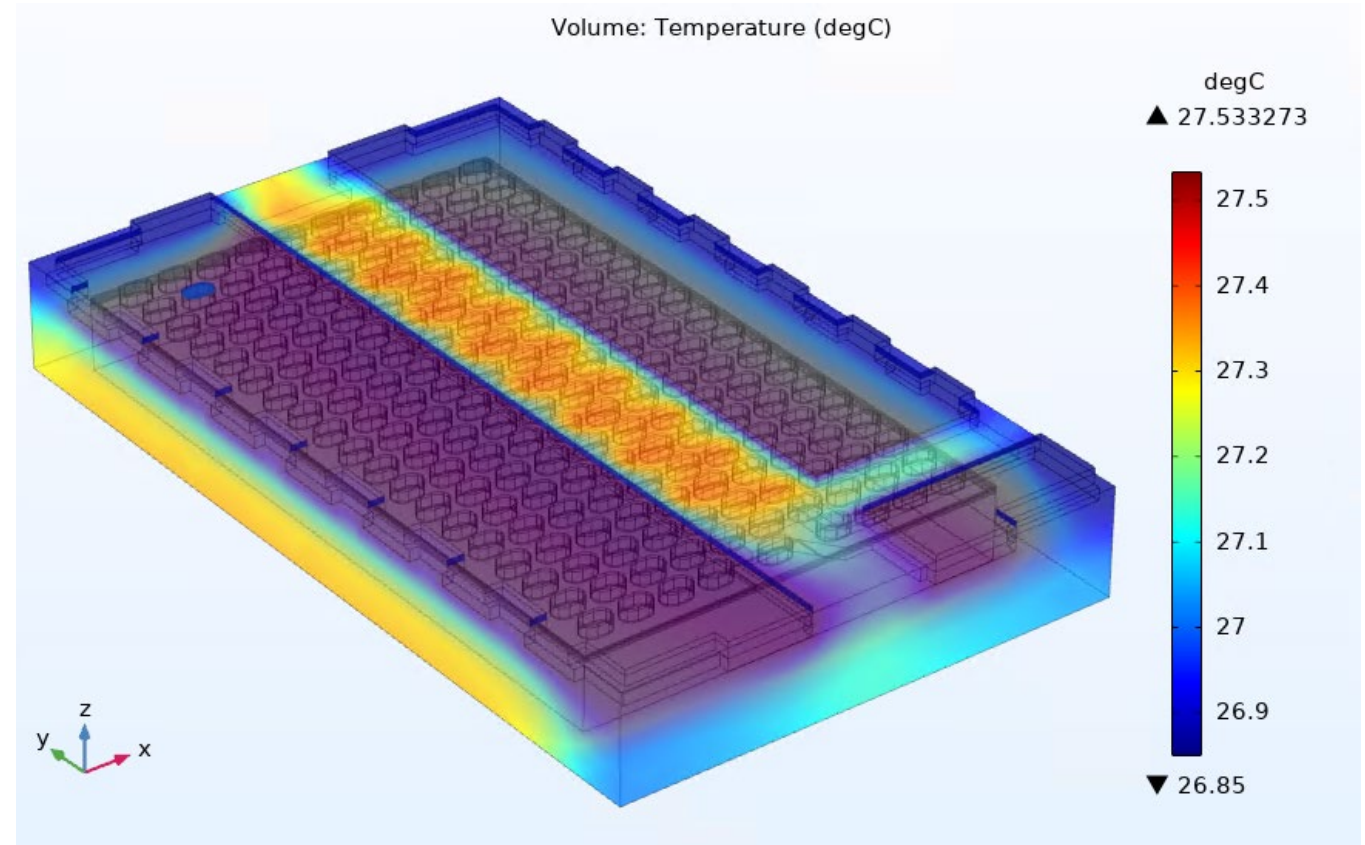
EPC2375 FEA thermal simulation



- The thermal model applies to EPC2375.
- 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.

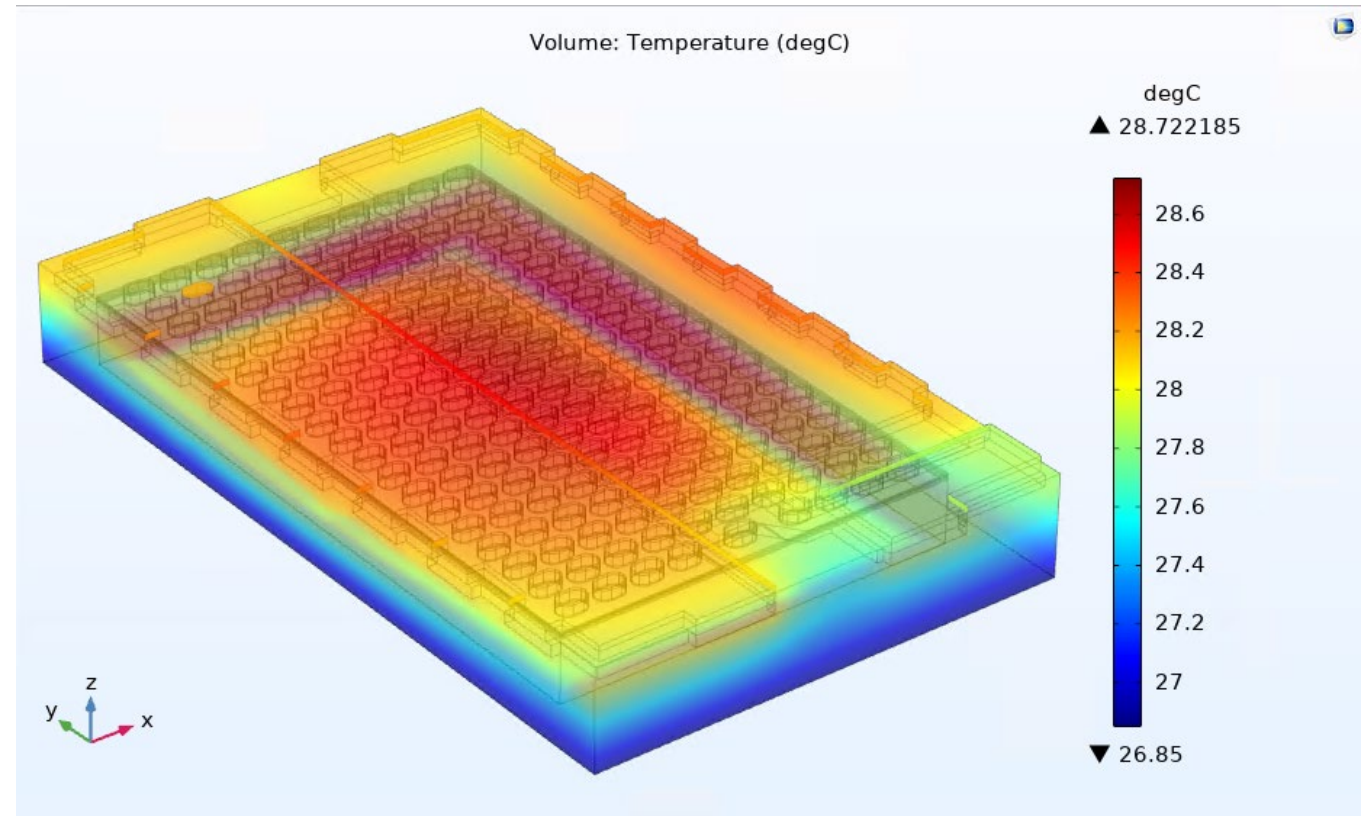
Steady-state $R_{\Theta JB}$

- Example: $P = 1 \text{ W}$

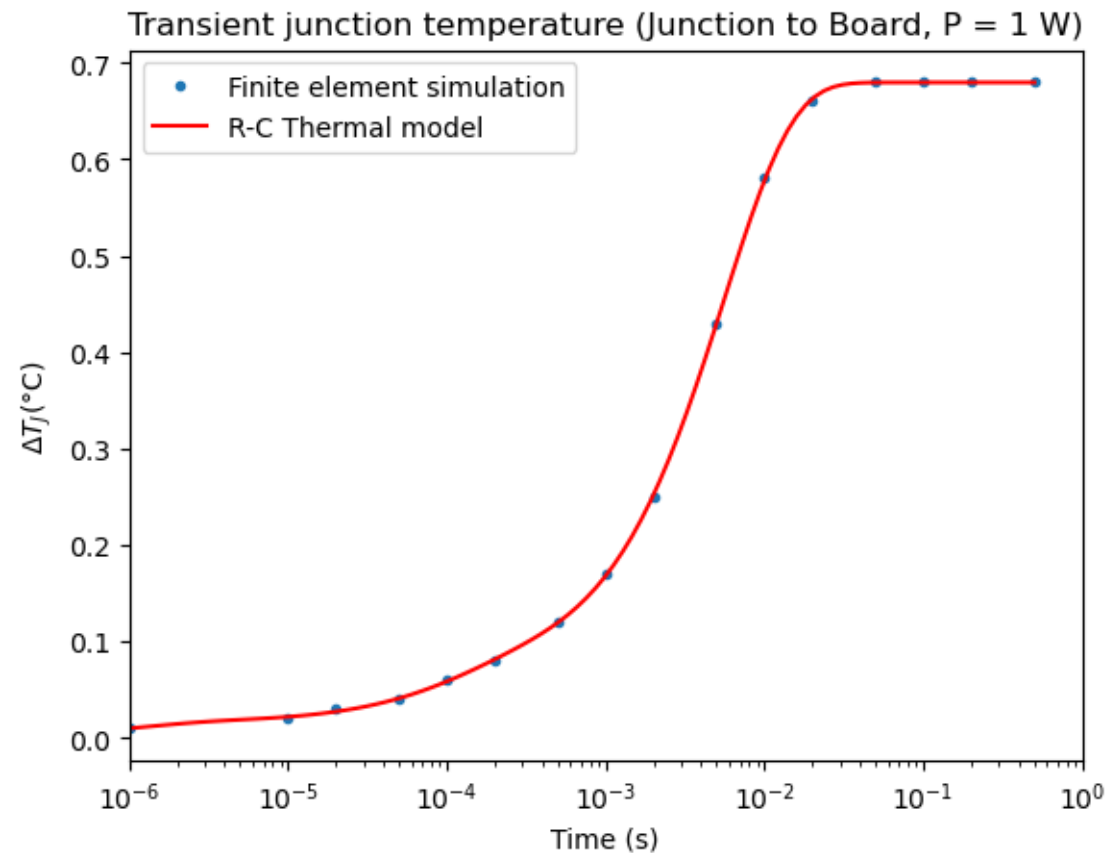


Steady-state $R_{\Theta JC}$

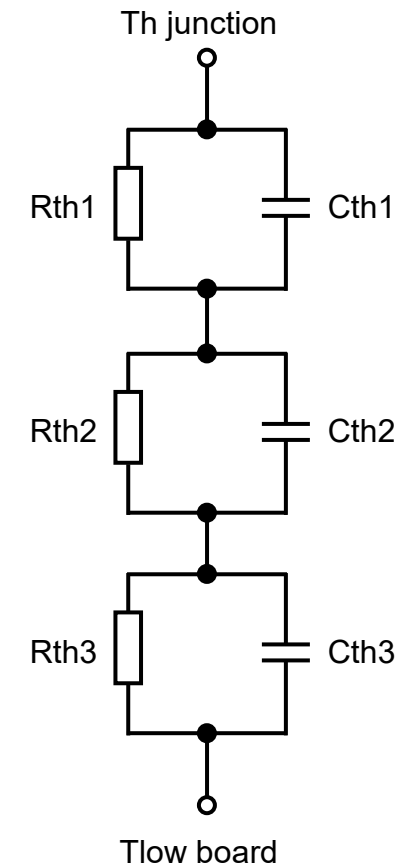
- Example: $P = 1 \text{ W}$



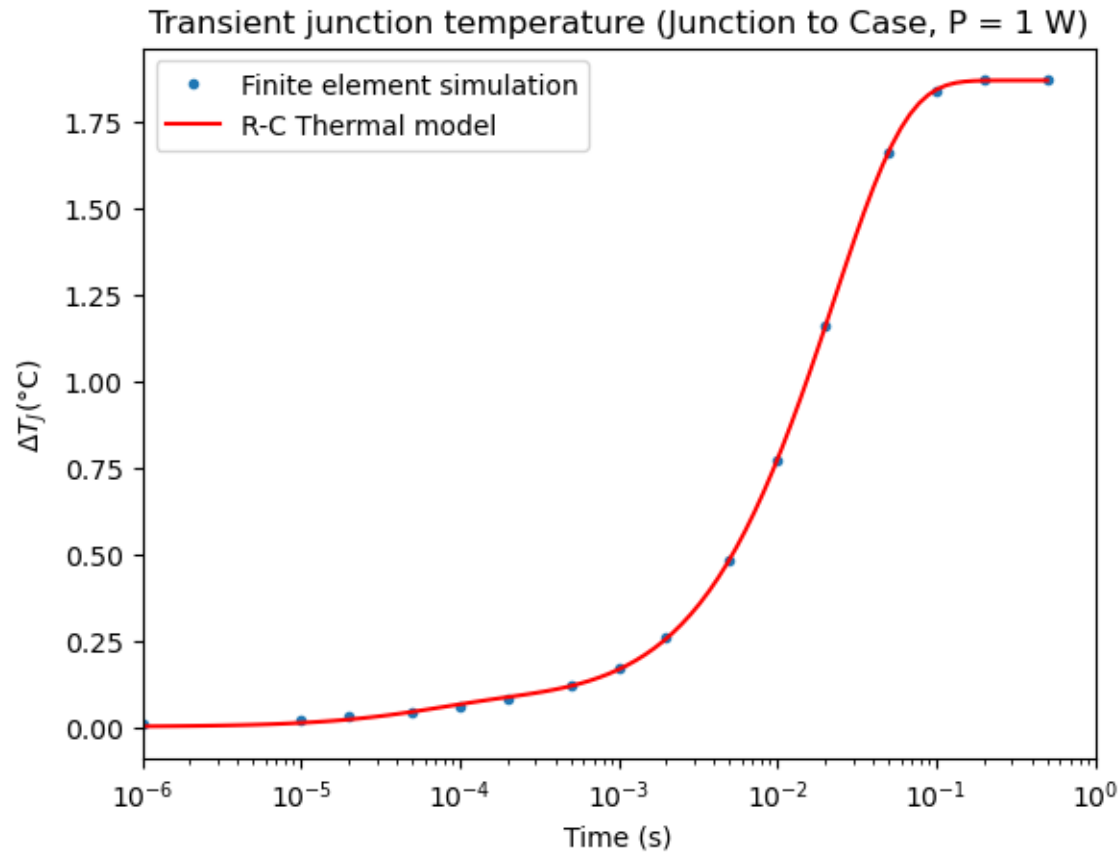
$Z_{\Theta JB}$ R-C thermal model



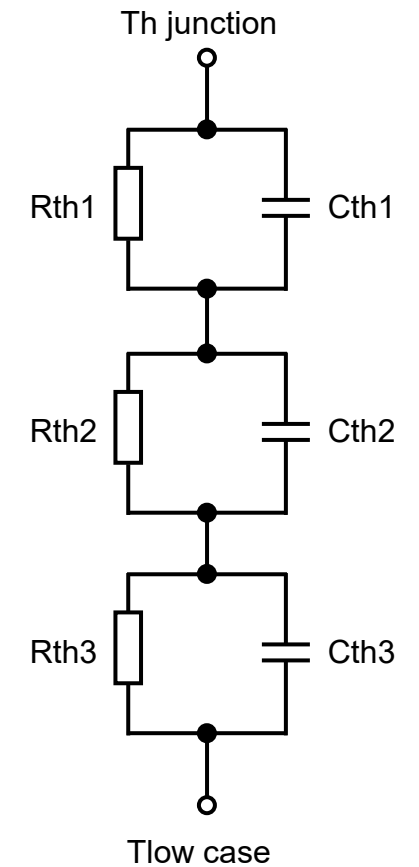
Model Parameter	Value	Unit
Rth1	1.62E-02	°C/W
Rth2	5.13E-02	
Rth3	6.12E-01	
Cth1	7.12E-05	J/°C
Cth2	2.05E-03	
Cth3	9.10E-03	



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



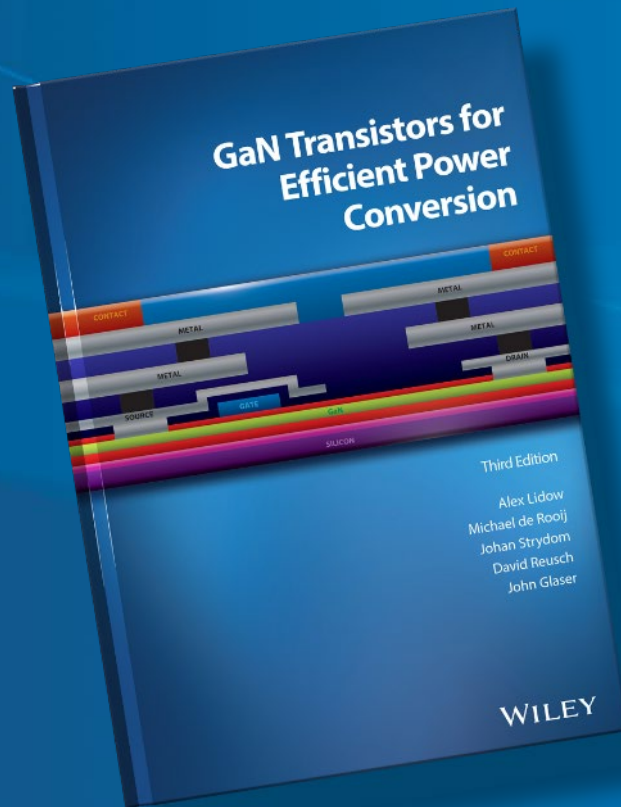
Model Parameter	Value	Unit
Rth1	6.81E-02	°C/W
Rth2	1.99E-01	
Rth3	1.60E+00	
Cth1	8.95E-04	J/°C
Cth2	2.73E-02	
Cth3	1.53E-02	



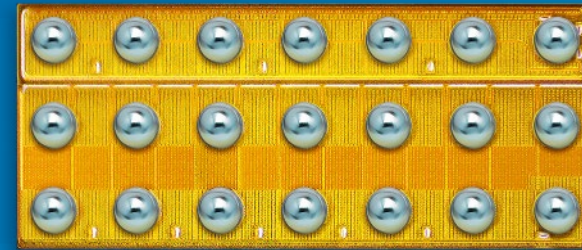


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