

## TPS54KB20 SIMPLIS Transient Model Features and Limitations

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### \* Model Usage Notes:

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#### \* A. Features have been modelled

- \* 1. Output Voltage Setting
- \* 2. Programmable Soft-Start
- \* 3. Frequency and Operation Mode Selection with RMSEL
- \* 4. Low-side FET Zero-Crossing
- \* 5. Current Sense and Positive Overcurrent Protection(OCP)
- \* 6. Low-side FET Negative Current Limit
- \* 7. Power Good
- \* 8. Over Voltage Protection (OVP)
- \* 9. Under Voltage Protection (UVP)
- \* 10. Output Voltage Discharge
- \* 11. EN/VIN UVLO Protection
- \* 12. BOOT functionality

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#### \* B. Features have not been modelled

- \* 1. Operating Quiescent Current
- \* 2. Shutdown Current
- \* 3. Temperature dependent characteristics
- \* 4. Ground Pins have been tied to 0V internally and hence model does not support Inverting topologies.
- \* 5. Hiccup or Latch-off

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#### \* C. Application Notes

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- \* 1. The parameter HAS\_POP\_ANALYSIS has been used to reach the steady state faster.

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