

# TPSM8A29 PSPICE 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. Internal Fixed Soft-Start and External Adjustable Soft-start
- \* 3. External REFIN for Output Voltage Tracking
- \* 4. Frequency and Operation Mode Selection
- \* 5. Low-side FET Zero-Crossing
- \* 6. Current Sense and Positive Overcurrent Protection (OCP)
- \* 7. Low-side FET Negative Current Limit
- \* 8. Power Good
- \* 9. Over Voltage Protection (OVP)
- \* 10. Under Voltage Protection (UVP)
- \* 11. Out-Of-Bounds (OOB) Operation
- \* 12. Output Voltage Discharge
- \* 13. UVLO Protection
- \* 14. BOOT functionality
- \* 15. Remote Sense

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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. Therefore, this model cannot be used for inverting topologies.

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\* C. Application Notes

- \* 1. The parameter STEADY\_STATE has been used to reach the steady state faster.  
Keep STEADY\_STATE = 0 to observe startup behaviour  
Keep STEADY\_STATE = 1, ILOAD = load current value and appropriate IC on capacitor to observe for faster Steady state.
- \* 2. Please do not provide external reference signal at SS/REFIN when using parameter STEADY\_STATE=1.  
This may lead to false SS/REFIN detection.

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