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** Released by: Texas Instruments Inc.

* Part: TPSM843B22

* Date: 08June2023

* Model Type: TRANSIENT

* Simulator: SIMPLIS

* Simulator Version: 8.40h

* EVM Order Number: TPSM843B22EVM

* EVM Users Guide: SLUUCK9 – April 2023

* Datasheet: SLUSE06 – March 2023

* Topologies Supported: Buck

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* Model Version: Final 1.00

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* Updates:

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* Final 1.00

* Release to Web.

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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

* 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. VCC UVLO Protection

* 13. BOOT functionality

* 14. This model can be used to simulate all the above features for the TPSM843B22, TPSM843A26, and TPSM843A22 by selecting the right device in F11 window.

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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.

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* C. Application Notes

- * 1. The parameter STEADY_STATE has been used to reach the steady state faster.
 - * Keep STEADYSTATE = 0 to observe startup behavior.
 - * Keep STEADYSTATE = 1 and appropriate IC on Inductor and capacitor to observe for faster Steady state and is must for AC Analysis.
- * 2. This model can be used to simulate TPSM843B22, TPSM843A26, and TPSM843A22 by selecting the right device in F11 window.

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