TPS548C26 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 using FB
* 2. Programmable Soft-Start
* 3. Frequency and Operation Mode Selection (FCCM and DCS Modes)
* 4. Safe start-up
* 5. Overcurrent Protection (OCP)
* 6. Input Voltage Over Voltage Protection (PVIN OV)
* 7. Open-drain power-good output (PGOOD)
* 8. Over Voltage Protection (OVP)
* 9. Under Voltage Protection (UVP)
* 10.EN/VIN UVLO Protection. The EN toggel function is not supported in this model.
* 11.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. Telemetry (V/I/T) and input power minotoring
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* C. Application Notes
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* 1. The parameter STEADY_STATE has been used to reach the steady state faster.
* Keep STEADYSTATE = 0 to observe startup behaviour.
* Keep STEADYSTATE = 1 and appropriate IC on Inductor and capacitor to observe for faster
Steady state.
* 2. Once the PVIN over-voltage, VOUT UVP, VOUT OVP fault is triggered, the device latches
off until Simulation is reset with the Fault cleared (No Fault Condition is present any more).
* 3. The user must carefully enter these values in accordance with the datasheet. The description
of these parameters are as below:
* - VIN: Input voltage
* - RMODE: to select Auto-skipping Eco-mode (DCM) OR for FCCM mode and Swtiching
Frequency
* - RILIM: CURRENT LIMIT
* - SS_TIME: SOFTSTART time
* - ILOAD: for load
* 4- The BOM, VIN, ILOAD parameter can be adjusted as needed on the F11 window
* 5- EN with delayed time can be supported on the STARTUP model by entering the
{EN_Delay} time in the F11 window