

TPS548B22 SIMPLIS Model Features and Limitations

Model Usage Notes:

A. Features have been modelled

1. Output Voltage Setting
2. Programmable Soft Start
3. UVLO Protection
4. Overcurrent Protection(OCP)
5. Over Voltage Protection(OVP)
6. Under Voltage Protection(UVP)
7. Power Good
8. Low-side FET Negative Current Limit
9. Hiccup
10. Out-Of-Bounds(OOB) Operation
11. BOOT functionality
12. Minimum ON time
13. Minimum OFF time
14. VSEL pin operation
15. FSEL pin operation
16. MODE pin operation

B. Features have not been modelled

1. Operating quiescent current and Shutdown current
2. Thermal shutdown characteristics

C. Application Notes

1. The parameter STEADY_STATE can be used to reach the steady state faster.
Keep STEADY_STATE = 0 to observe startup behaviour and
Keep STEADY_STATE = 1 and add appropriate initial conditions on Inductor, Cout and BP capacitor for faster Steady state.
2. AC response is not validated for this model.
3. Ground Pins have been tied to 0V internally and hence model does not support Inverting topologies.