

Model Usage Notes:

A. Features have been modelled

1. Soft start with programmable output voltage slew rate
2. Current Limit
3. Shutdown through EN pin

B. Features have not been modelled

1. Multi-phase support
2. Power Good
3. AVS support with configurable slew-rate
4. Automatic mode control based on the loading (PFM or PWM mode) or Forced-PWM mode operation
5. External clock synchronization
6. Voltage Monitor
7. Operating Quiescent Current
8. Temperature dependent characteristics
9. Ground Pins have been tied to 0V internally and hence model does not support Inverting topologies.

C. Application Notes

1. To observe startup behaviour select STEADY_STATE parameter to 0
To observe steady state behaviour select STEADY_STATE parameter to 1
2. Parameter Device =0 to select the LP8764-Q1, Device=1 to select the LP8762-Q1.
3. Parameter SLEW_RATE refers to BUCK1_SLEW_RATE bits (3 bits) of BUCK1_CONF Register.
 - a. SLEW_RATE =0 = 33.3mV/ μ s
 - b. SLEW_RATE =1 = 20mV/ μ s
 - c. SLEW_RATE =2 = 10mV/ μ s
 - d. SLEW_RATE =3 = 5mV/ μ s
 - e. SLEW_RATE =4 = 2.5mV/ μ s
 - f. SLEW_RATE =5 = 1.25mV/ μ s
 - g. SLEW_RATE =6 = 0.625mV/ μ s
 - h. SLEW_RATE =7 = 0.3125mV/ μ s
4. High EN signal, startup the model. Low EN signal, shutdown the model.
5. Below is the table used for parameter usecase along with external components.

usecase	use case test condition	L	CLoad	CPOL
1	4.4MHz MP	220nH	47 μ FX1	10 μ FX4
2	2.2MHz MP	470nH	47 μ FX3	10 μ FX4
3	2.2MHz DDR VTT	470nH	22 μ FX1	10 μ FX2
4	4.4MHz LC	220nH	22 μ FX1	10 μ FX2
5	4.4MHz HV	470nH	47 μ FX1	10 μ FX4
6	2.2MHz SP	1000nH	47 μ FX3	10 μ FX2
7	2.2MHz 5Vin SP	1000nH	47 μ FX3	10 μ FX4
8	4.4MHz Radar	470nH	22 μ FX1	-
9	8.8MHz Radar	470nH	22 μ FX1	-