

Texas Instruments - TPS65721

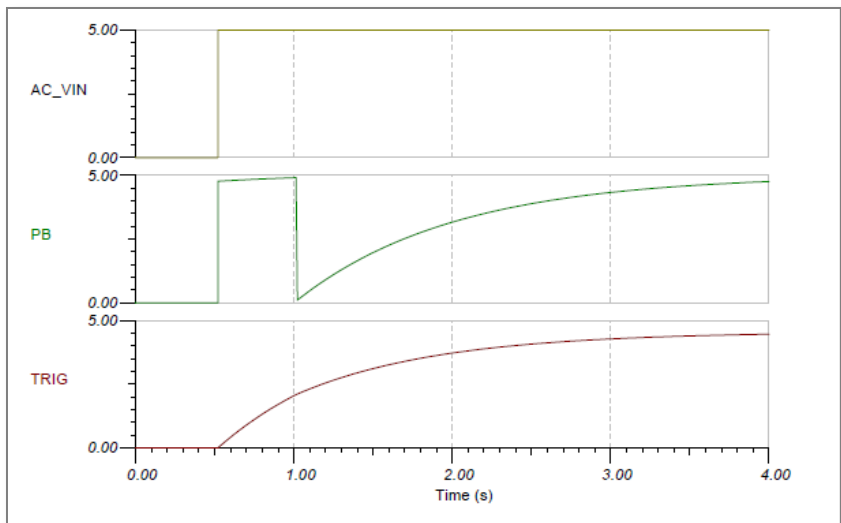
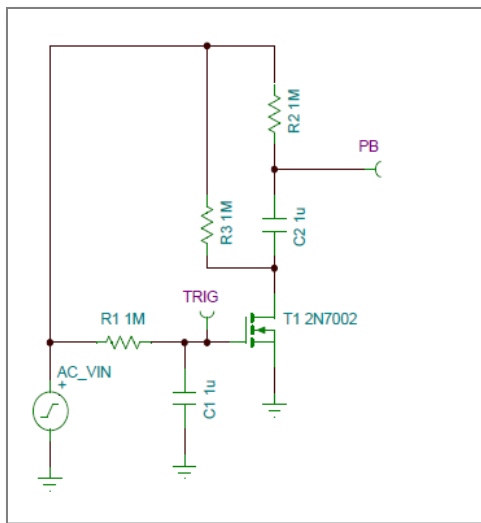
A low battery condition on the battery will make the system think it's a new battery insert and needs a PB as if it's the first time startup. The UVLO protects the battery and the system.

8.3.10.6.1 ENABLE for DCDC1 and LDO1

The DCDC1 converter and LDO1 are enabled as soon as PB_IN is pulled LOW OR input voltage at pin AC is detected (<CH_PGOOD> = 1).

There is a power-hold pin for DCDC1 (HOLD_DCDC1) and one for LDO1 (HOLD_LDO1). When HOLD_DCDC1 is pulled HIGH, DCDC1 is kept enabled after PB_IN was released HIGH. HOLD_LDO1 serves the same function and keeps LDO1 enabled after PB_IN was released HIGH. After first power-up by pulling PB_IN = LOW or applying voltage at AC, the HOLD pins HOLD_DCDC1 and HOLD_LDO1 can also be used as enable pins, such that they turn on LDO1 or DCDC1, respectively when they are pulled HIGH. **This function is available as long as there is a voltage at the battery. After the battery was removed or was discharged, first power-on needs to be done by pulling PB_IN = LOW.**

There is a work around for an actual button. It's a small circuit that creates a PB event when AC is connected. If you have a low battery event removing the AC input and then reconnecting it will create a first time startup. You may need to adjust the caps and resistors to increase the time. Usually not needed.



You can test this by creating a PB and see if the problem clears. If it does clear the problem, then add the circuit above so that you don't need to add a button.