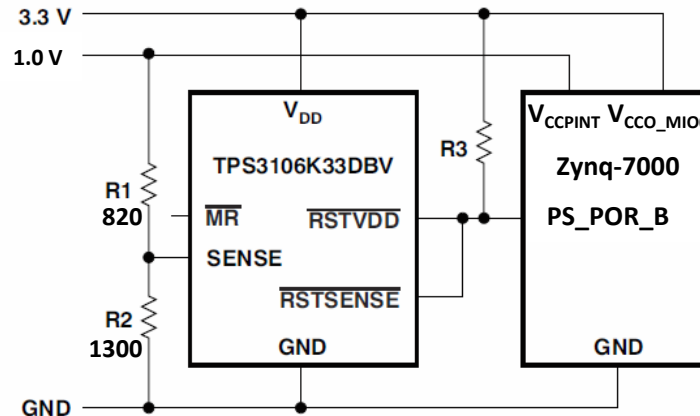


# Example PS\_POR\_B Supervisor Circuit (Just one example of many possible implementations)

- An example device is the TI TPS3106K33DBV with an input sense threshold of 0.551V and valid reset assertion with a minimum  $V_{DD}$  of 0.4V
  - This device is appropriate for  $V_{DD}$  powering from 3.3V  $V_{CCO\_MIO0}$  and sensing of a second power supply
  - Powering  $V_{DD}$  from  $V_{CCPINT}$  is not recommended for this device
- The key criteria for selecting a supervisor circuit is the minimum  $V_{DD}$  level that will guarantee a valid assertion of PS\_POR\_B to GND
  - The minimum  $V_{DD}$  level should be 0.60V when powered by  $V_{CCPAUX}$  or 0.80V when powered by  $V_{CCO\_MIO0}$  to ensure that either the external supervisor circuit or the internal POR monitor is asserting reset within the device.



Note: R1 and R2 were selected to create 0.551V at the sense pin when  $V_{CCPIINT}$  has dropped to ~0.90V

# Additional PS\_POR\_B Supervisor Circuit Guidelines

- **For any new designs review the customer systems to ensure**
  - PS\_POR\_B is held low during power-on until the PS power supplies reach minimum levels as required by the datasheets and TRM
  - PS\_POR\_B is asserted low during the power-off sequence, before  $V_{CCPINT}$  reaches 0.80V and held asserted low until  $V_{CCPINT}$  is lower than 0.40V or  $V_{CCPAUX}$  is lower than 0.70V or  $V_{CCO_MIO0}$  is lower than 0.90V
  - If PS\_POR\_B is driven by a supervisor circuit it must guarantee assertion to GND when its  $V_{DD}$  supply is 0.30V if powered by  $V_{CCPINT}$ , 0.60V if powered by  $V_{CCPAUX}$  or 0.80V if powered by  $V_{CCO_MIO0}$ 
    - If another supply is used then it must be guaranteed to be valid for the entire power-on and power-off phase