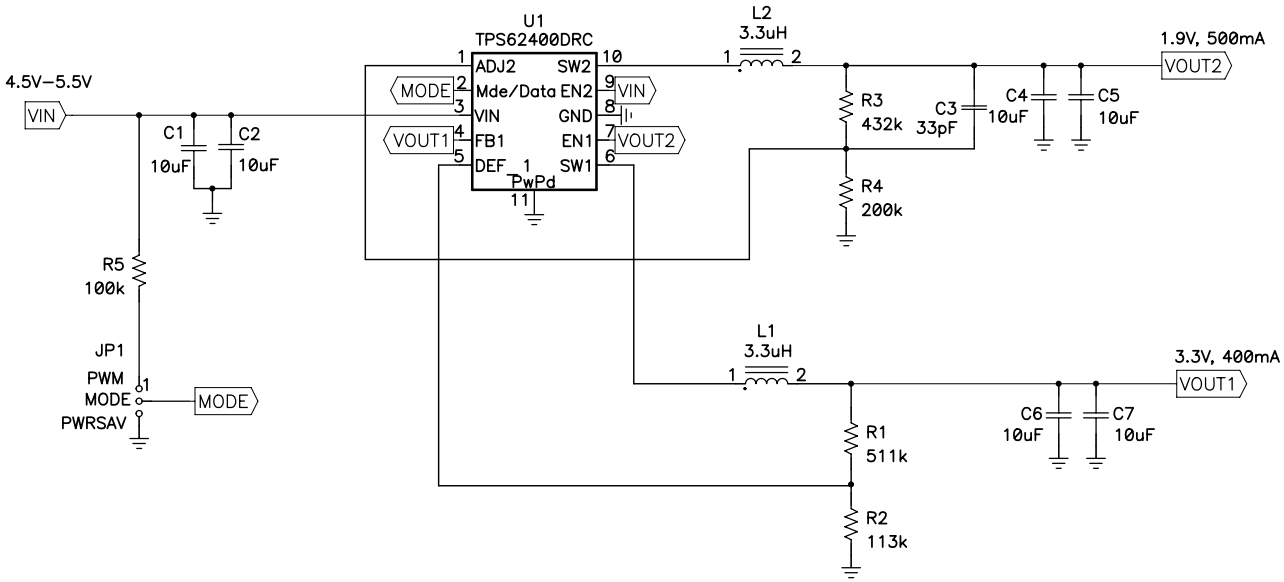


TEXAS INSTRUMENTS

| | | |
|---|---|---|
| Title: F2833x Power Reference Design | | |
| Size: B | Number: PMP3781 | Rev: B |
| Date: 05/21/08 | | Drawn by: K Ohn |
| Filename: PMP3781.sch | | Sheet: of |

Filename: PMP3781_bom.xls

Date: 04/16/2008

# PMP3781 BOM

| Count | RefDes | Value | Description | Size | Part Number | MFR |
|---|---|---|---|---|---|---|
| 1 | C3 | 33pF | Capacitor, Ceramic, 50V, C0G, 5% | 0402 | C1608C0G1H330J | TDK |
| 6 | C1-C6 | 10uF | Capacitor, Ceramic, 10V, X5R, 10% | 0805 | C2012X5R1A106K | TDK |
| 1 | JP1 | PTC36SAAN | Header, 3 pin, 100mil spacing, (36-pin strip) | 0.100 x 3 | PTC36SAAN | Sullins |
| 2 | L1, L2 | 3.3uH | Inductor, SMT, 1.1-A, 220-milliohm | 0.118 x 0.118 inch | LPS3010-332ML | Coilcraft |
| 1 | R1 | 511k | Resistor, Chip, 1/16W, x% | 0402 | Std | Std |
| 1 | R2 | 113k | Resistor, Chip, 1/16W, x% | 0402 | Std | Std |
| 1 | R3 | 432k | Resistor, Chip, 1/16W, x% | 0402 | Std | Std |
| 1 | R4 | 200k | Resistor, Chip, 1/16W, x% | 0402 | Std | Std |
| 1 | R5 | 100k | Resistor, Chip, 1/16W, 1% | 0402 | Std | Std |
| 1 | U1 | TPS62400DRC | IC, 2.25 MHz Dual Step Down Converter | QFN10 | TPS624x0DRC | TI |

# 1 Power Up

The figure below shows the startup waveforms after ENABLE is applied. The outputs voltages shown are at full load. (Enable=5.00V/div, 1.9-V=1.00V/div, 3.3-V=1.00V/div, 500us/div)

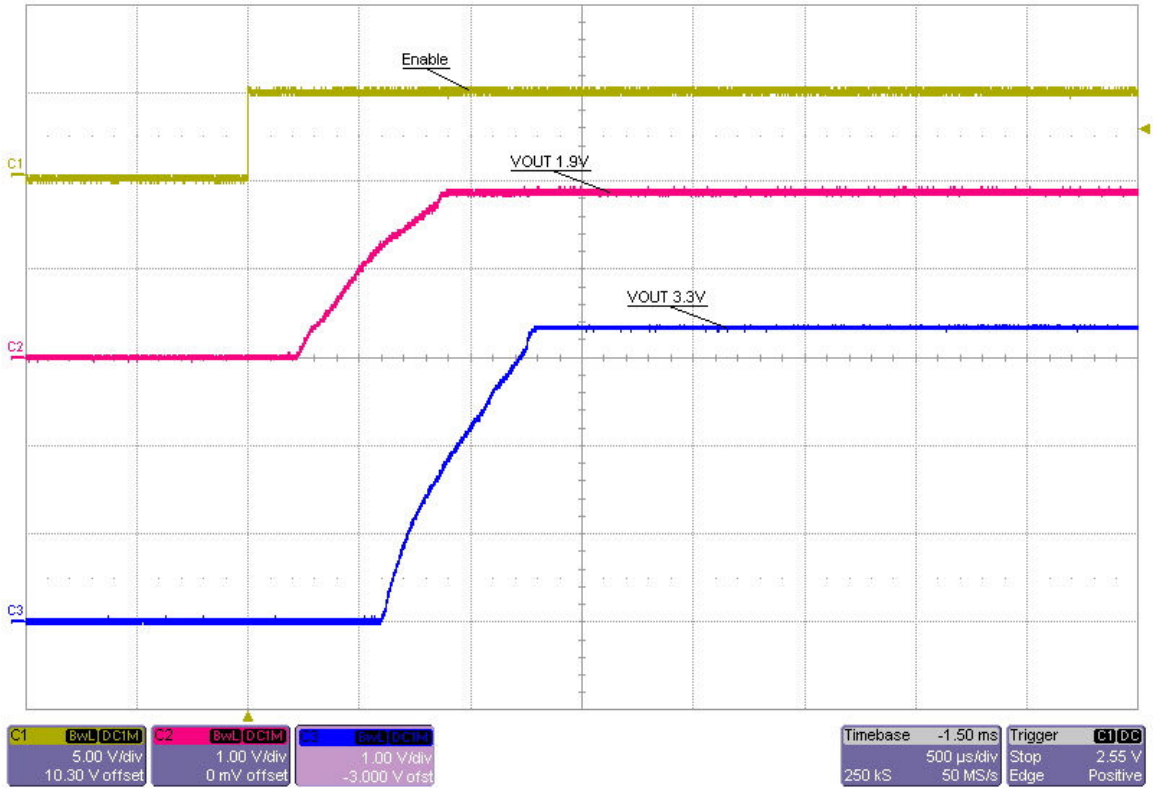


**Figure 1. Power Up with 5-V Input and ENABLE Voltage**

Once ENABLE is pulled high, the 1.9-V rail comes up and 3.3-V rail comes up later.

## 2 Power Down

The figure below shows the power down waveforms after ENABLE is pulled low. The outputs voltages shown are at full load. (Enable=5.00V/div, 1.9-V=1.00V/div, 3.3-V=1.00V/div, 500us/div)

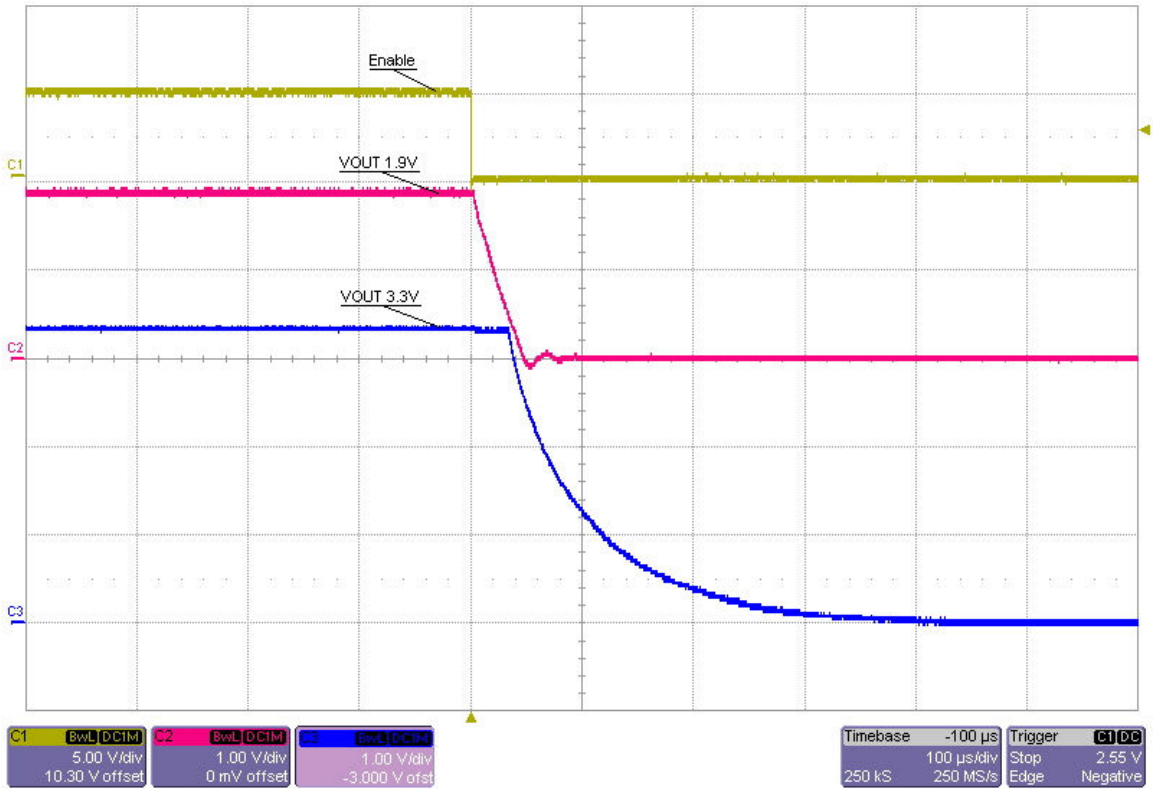


**Figure 3. Power Down with 5-V Input and ENABLE Voltage**

Once ENABLE is pulled low, the 1.9-V rail starts to come down first, and 3.3V comes down after 40us.

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