

TEXAS INSTRUMENTS TPS74801, TPS73633, TPS73218

| | | |
|----------------------------|-----------------------|--------|
| Title | | |
| PRIMUS DSP POWER - ALL LDO | | |
| Size | Number | Rev |
| B | PMP4079_REVC | C |
| Date | 02/15/2010 | |
| Filename | Drawn by T. Olabumuyi | |
| | Sheet | 1 of 1 |

Filename: PMP4079_REVC_bom.xls

Date: 02/15/2010

PMP4079_REVC BOM

| COUNT | RefDes | Value | Description | Size | Part Number | MFR |
|-------|--------|-------------|---|--------------|----------------|---------|
| 1 | C1 | 1.0uF | Capacitor, Ceramic, 25V, X5R, 20% | 0603 | C1608X5R1E105M | TDK |
| 2 | C2, C5 | 4.7uF | Capacitor, Ceramic, 6.3V, X5R, 20% | 0603 | C1608X5R0J106M | TDK |
| 1 | C3 | 4.7uF | Capacitor, Ceramic, 6.3V, X5R, 10% | 0603 | C1608X5R0J475K | TDK |
| 1 | C4 | 22uF | Capacitor, Ceramic, 6.3V, X5R, 20% | 0805 | C2012X5R0J226M | TDK |
| 2 | C6, C9 | 0.01uF | Capacitor, Ceramic, 50V, COG, 10% | 0402 | Std | Std |
| 2 | C7, C8 | 1uF | Capacitor, Ceramic, 6.3V, X5R, 20% | 0603 | C1608X5R1E105M | TDK |
| 2 | J1, J3 | PTC36SAAN | Header, 2 pin, 100mil spacing, (36-pin strip) | 0.100 x 2 | PTC36SAAN | Sullins |
| 1 | J2 | ED1514 | Terminal Block, 2 pin, 6A, 3.5mm | 0.27 x 0.25 | ED1514 | OST |
| 2 | J5, J6 | ED1609-ND | Terminal Block, 2-pin, 15-A, 5.1mm | 0.40 x 0.35" | ED1609 | OST |
| 1 | R1 | 2.49k | Resistor, Chip, 1/16W, 1% | 0603 | Std | Std |
| 1 | R2 | 4.99k | Resistor, Chip, 1/16W, 1% | 0603 | Std | Std |
| 1 | R3 | 10.0k | Resistor, Chip, 1/16W, 1% | 0603 | Std | Std |
| 1 | U1 | TPS74801DRC | IC, 1.5A LDO Regulator with Soft-Start | SON-10 | TPS74801DRC | TI |
| 1 | U2 | TPS73633DRB | IC, Cap-Free, NMOS, 400mA LDO Regulator With Reverse Current Protection | QFN-8 | TPS73633DRB | TI |
| 1 | U3 | TPS73218 | IC, 250mA, Low Iq, Wide Bandwidth, LDO Linear Regulators | SOT23-5 | TPS73218DBV | TI |



OMAP-L137 / C6747 / C6745 / C6743
TPS74801, TPS73633, TPS73218 – (PMP4079)
Updated 3/24/2010

The following test report includes measurements for the following output voltage rails using a **5V input**.

This design meets the power sequencing requirements required by OMAP-L137 / C6747 / C6745 / C6743.

Contents

Start- Up Waveform

- Unloaded
- Fully Loaded

TPS 74801 – LDO (1.2V@0.66A)

- Output Ripple
- Load Transient (50 to 100% Step)

TPS73633 – LDO (3.3V@0.165A)

- Output Ripple
- Load Transient (50 to 100% Step)

Start- Up Waveform

Ch1: 1.2V – no load

Ch2: 3.3V – no load

Ch3: 1.8V- no load

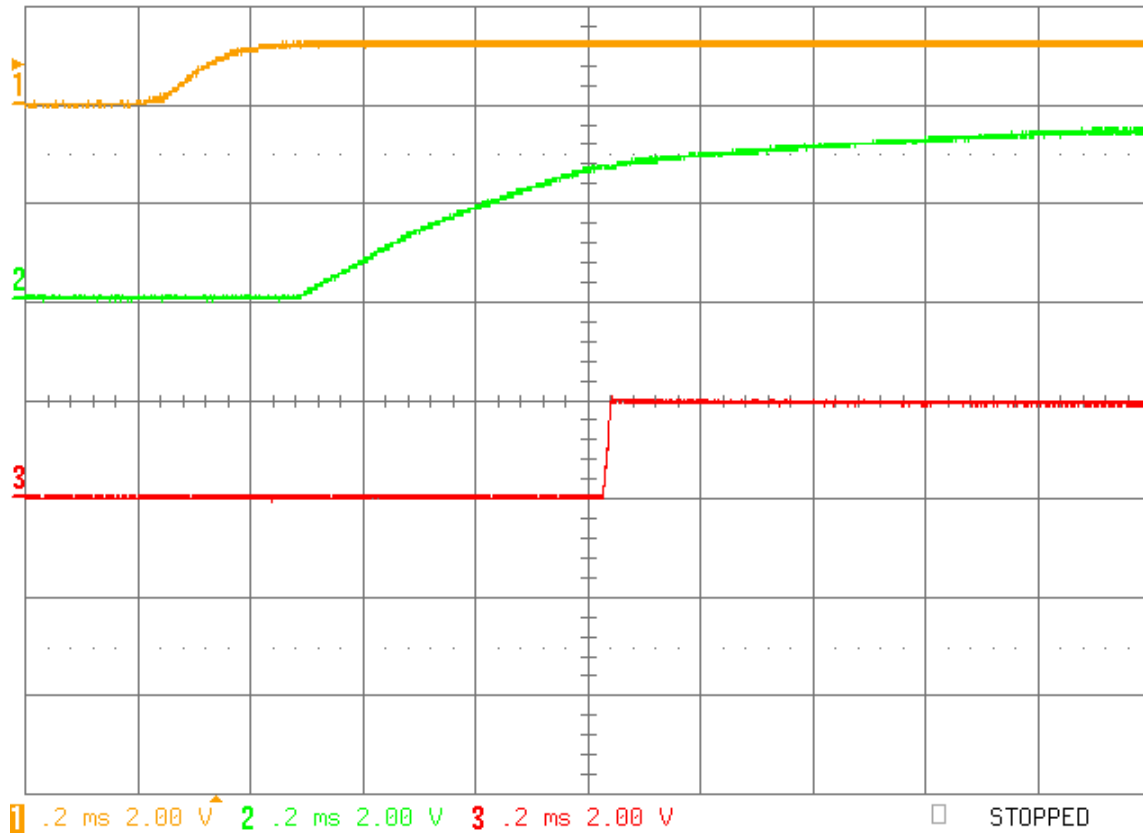


Fig 1a: Start Up Waveform with no load on outputs

Ch1: 1.2V @0.66A

Ch2: 3.3V @ 0.165A

Ch3: 1.8V @ 0.05A

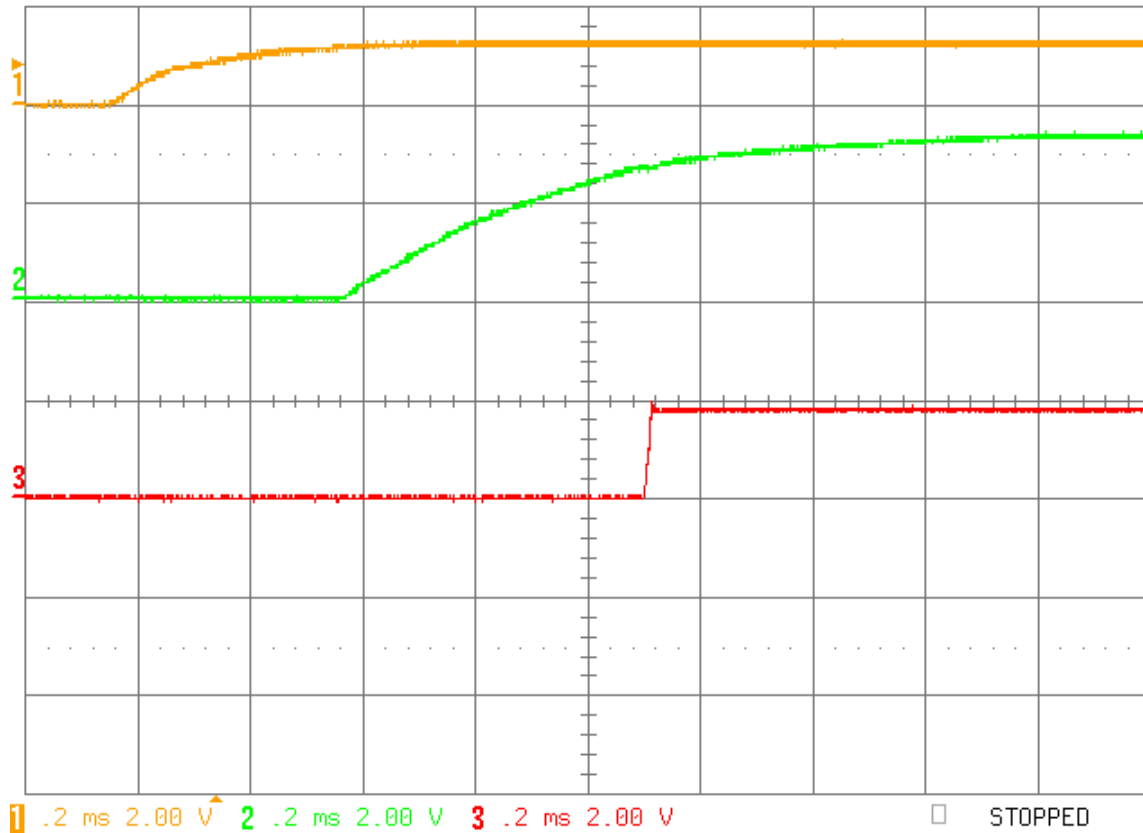


Fig 1b: Start Up Waveform with outputs fully loaded

1.2V@0.66A (TPS 74801)

Output Ripple

Ch 1: 1.2V Output (ac coupled)

Ch 4: Load Current

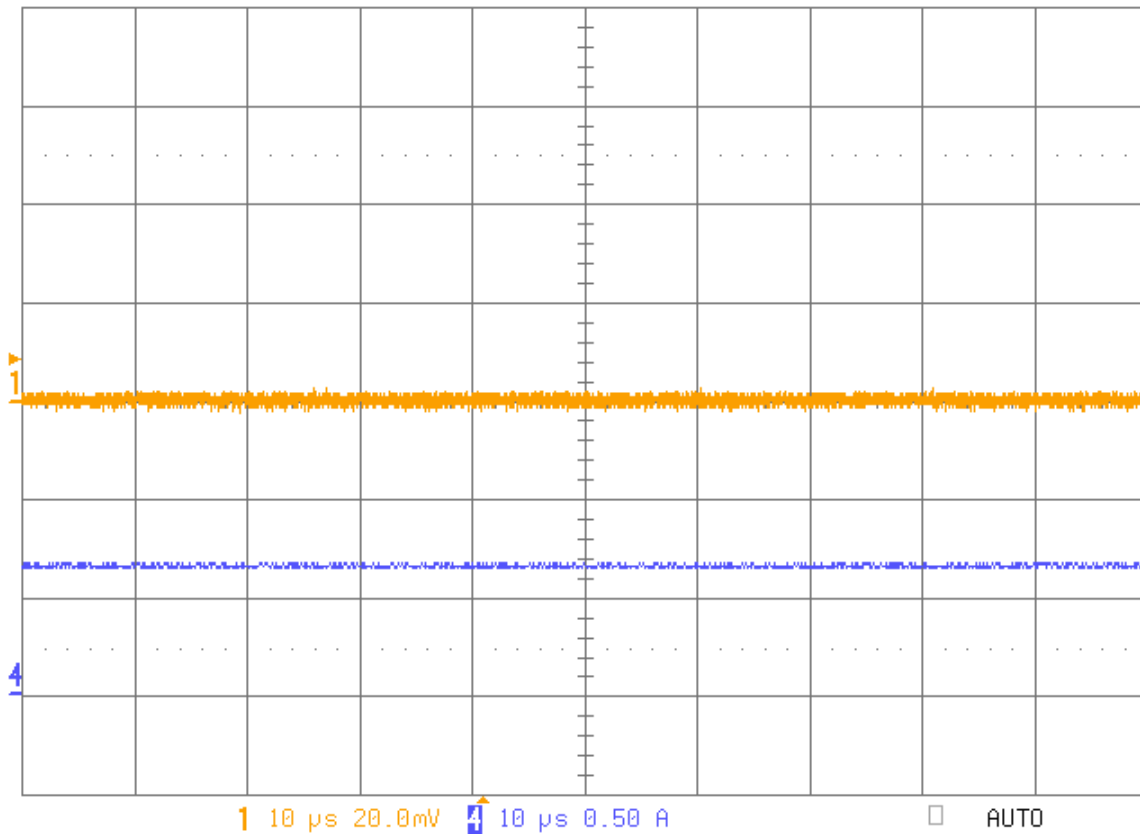


Fig 2: Output Ripple for 1.2V @ 0.66A

1.2V@0.66A (TPS 74801)

Load Transient (50 to 100% Step)

Ch 1: 1.2V Output (ac coupled)

Ch 4: Load Current

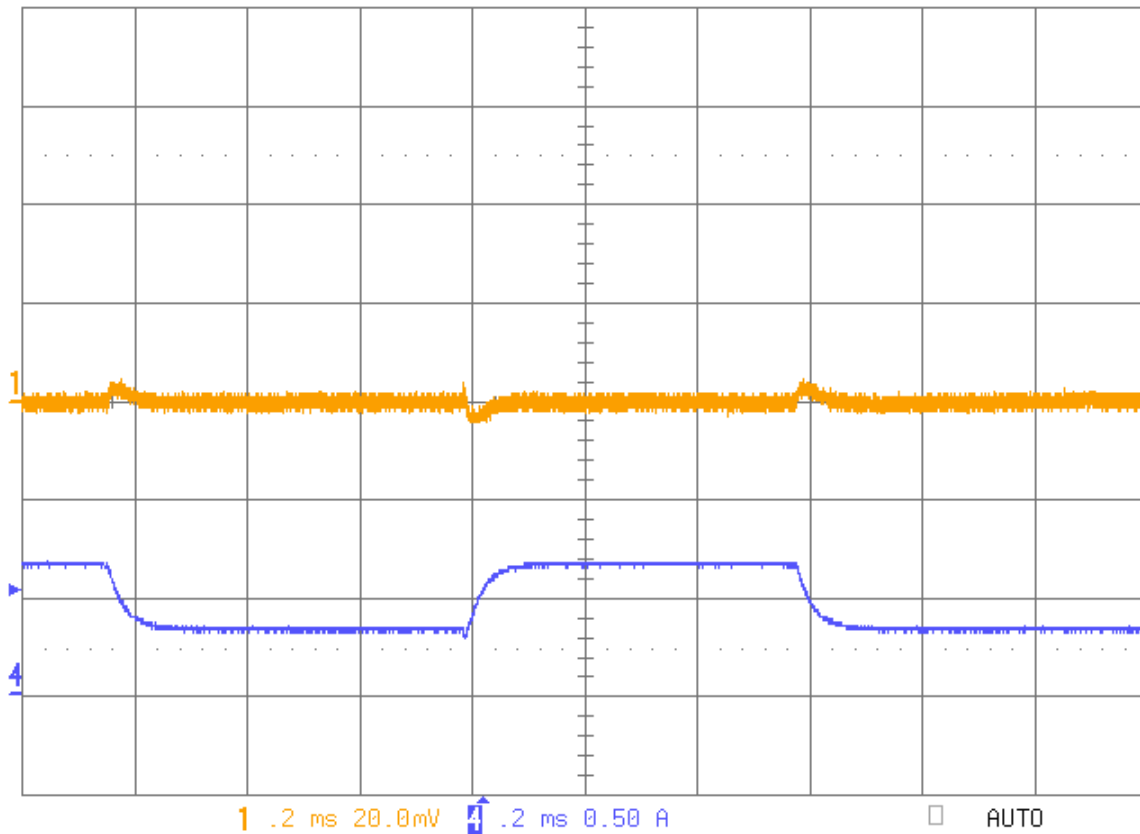


Fig 3: Transient response on 1.2V output. Step from 0.33A to 0.66A

3.3V@0.165A (TPS73633)

Output Ripple

Ch 1: 3.3V Output (ac coupled)

Ch 4: Load Current

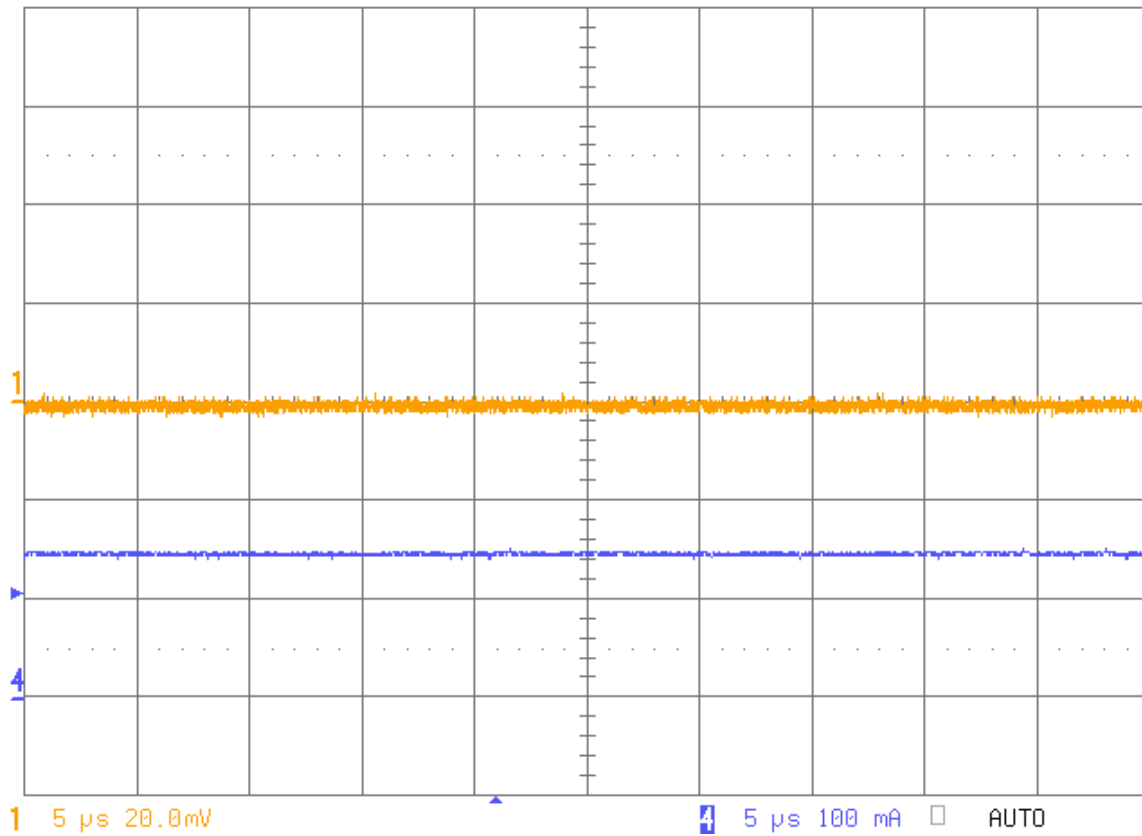


Fig 4: Output ripple 3.3V @ 0.165A

3.3V@0.165A (TPS73633)

Load Transient (50 to 100% Step)

Ch 1: 3.3V Output (ac coupled)

Ch 4: Load Current

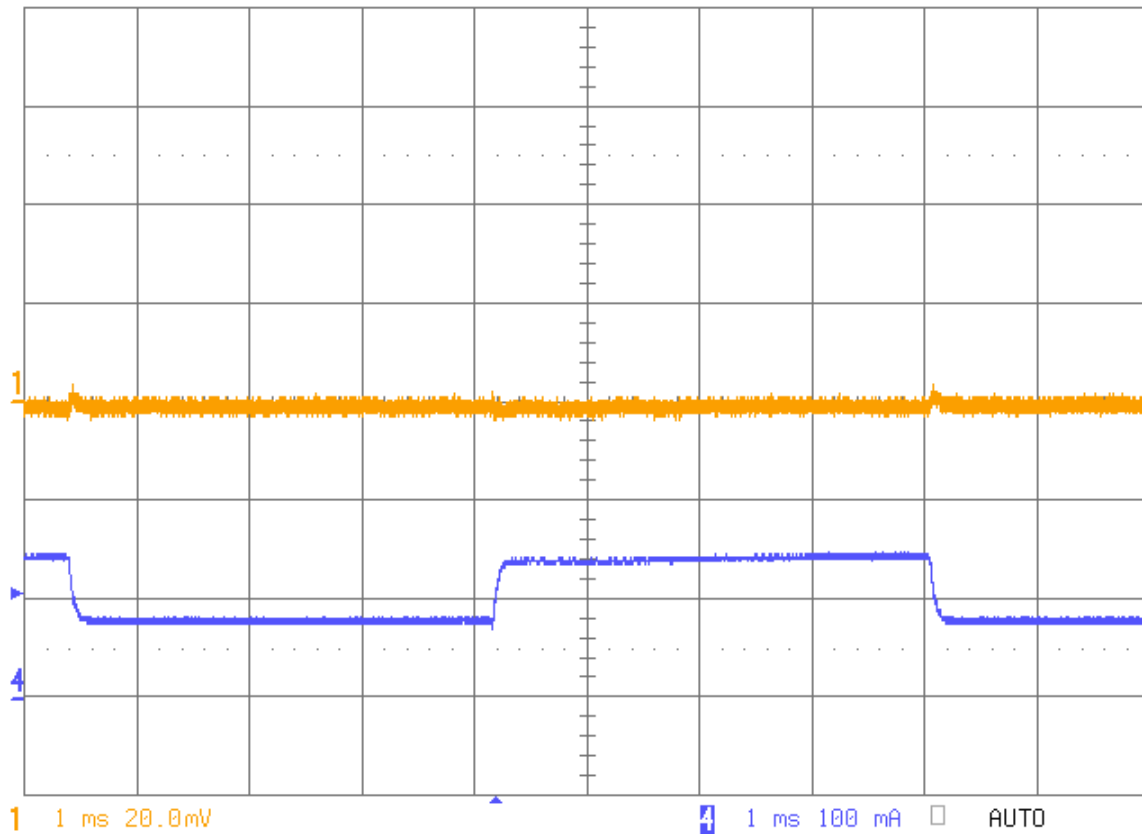


Fig 5: Load Transient on 3.3V output. Step from 0.083A to 0.165A

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