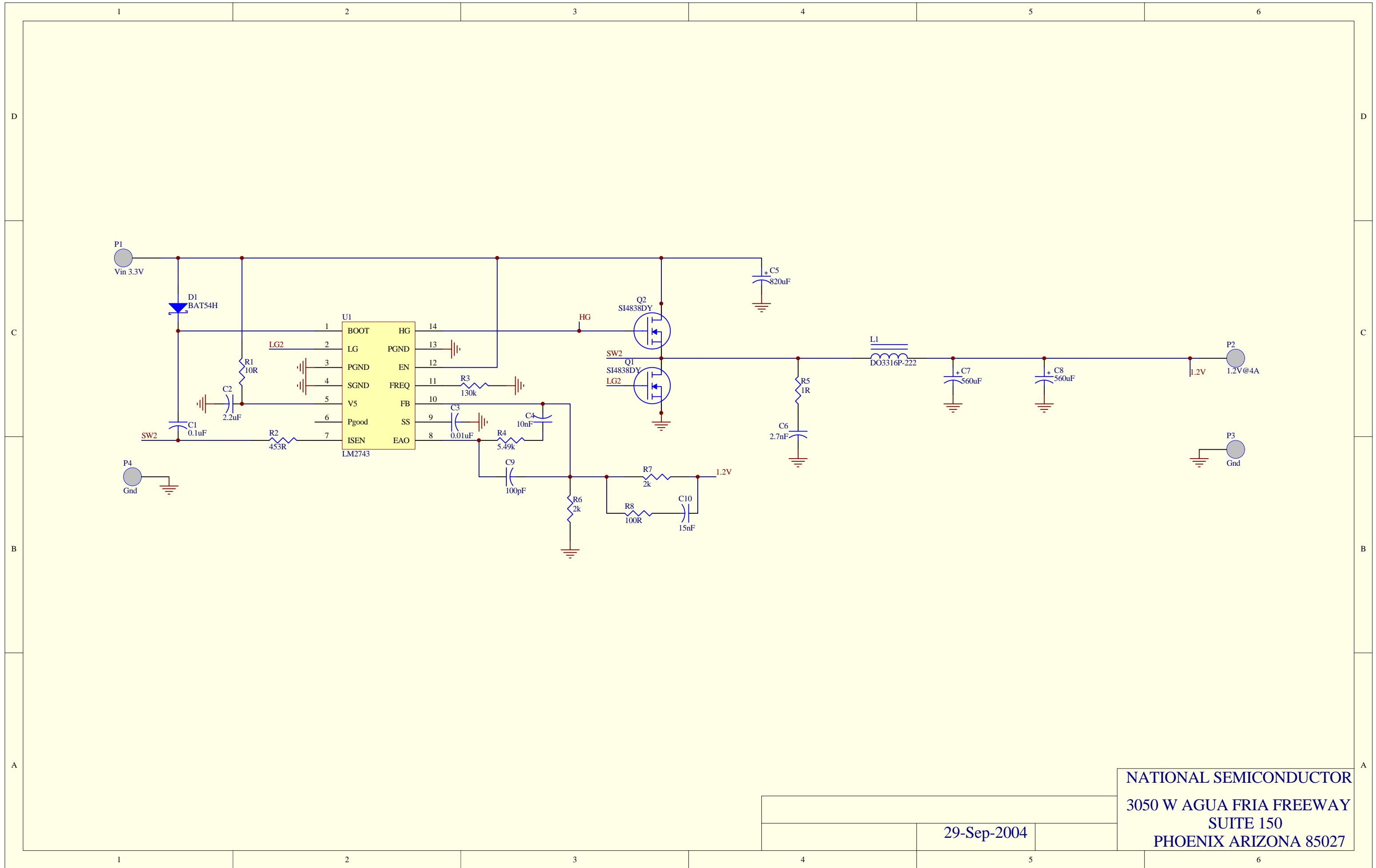
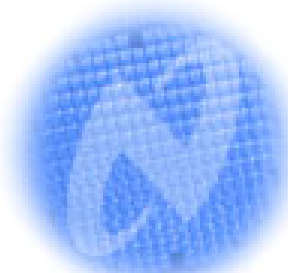


Designator	Part Type	Manufacturer Part No	Description
C1	0.1uF	VISHAY VJ0805Y104KXXA	Capacitor Ceramic X7R
C2	2.2uF	TDK C2012X5R0J225	Capacitor Ceramic X7R
C3	0.01uF	VISHAY VJ0805Y103KXXA	Capacitor Ceramic X7R
C4	10nF	VISHAY VJ0805Y103KXXA	Capacitor Ceramic X7R
C5	820uF	SANYO 6MB820EXR	SANYO Through Hole Cap
C6	2.7nF	VISHAY VJ0805Y272KXXA	Capacitor Ceramic X7R
C7	560uF	SANYO 4MB560EXR	Sanyo surface mount super low ERS
C8	560uF	SANYO 4MB560EXR	Sanyo surface mount super low ERS
C9	100pF	VISHAY VJ0805A101KXXA	Capacitor Ceramic X7R
C10	15nF	VISHAY VJ0805Y153KXXA	Capacitor Ceramic X7R
D1	BAT54H	ON SEMI BAT54H	Schottky Diode
L1	DO3316P-222	COILCRAFT DO3316P-222	SMT Power inductor
P1	Vin 3.3V		TEST POINT
P2	1.2V@4A		TEST POINT
P3	Gnd		TEST POINT
P4	Gnd		TEST POINT
Q1	SI4838DY	VISHAY SI4838DY	Logic Level, Single N-Channel MOSFET Power Trench
Q2	SI4838DY	VISHAY SI4838DY	Logic Level, Single N-Channel MOSFET Power Trench
R1	10R	VISHAY CRCW080510R0F	1% Thick Film
R2	453R	VISHAY CRCW08054530F	1% Thick Film
R3	130k	VISHAY CRCW08051303F	1% Thick Film
R4	5.49k	VISHAY CRCW08055432F	1% Thick Film
R5	1R	VISHAY CRCW08051R00F	1% Thick Film
R6	2k	VISHAY CRCW08052001F	1% Thick Film
R7	2k	VISHAY CRCW08052001F	1% Thick Film
R8	100R	VISHAY CRCW08051000F	1% Thick Film
U1	LM2743	NST SEMI LM2743	Synchronous Buck Controller



NATIONAL SEMICONDUCTOR
 3050 W AGUA FRIA FREEWAY
 SUITE 150
 PHOENIX ARIZONA 85027

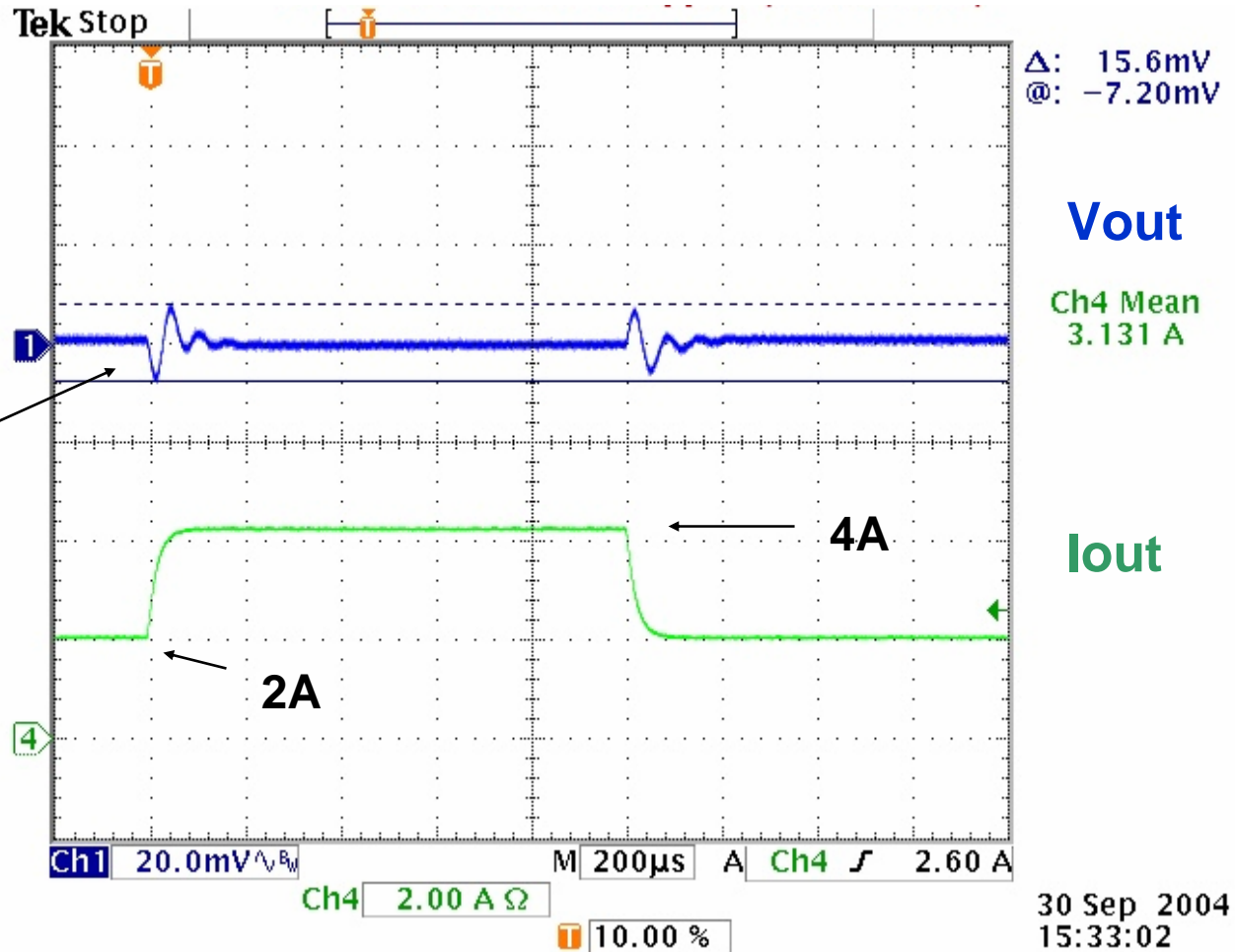
29-Sep-2004

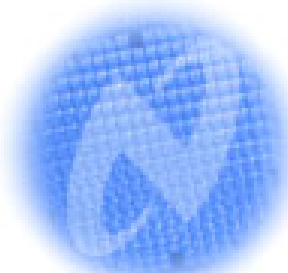


Transient response

- $V_{in} = 5V$
- $V_{out} = 1.2V$
- I_{out} Transient:
 - 2A to 4A

V_{out} transient:
+/- 7.8mV

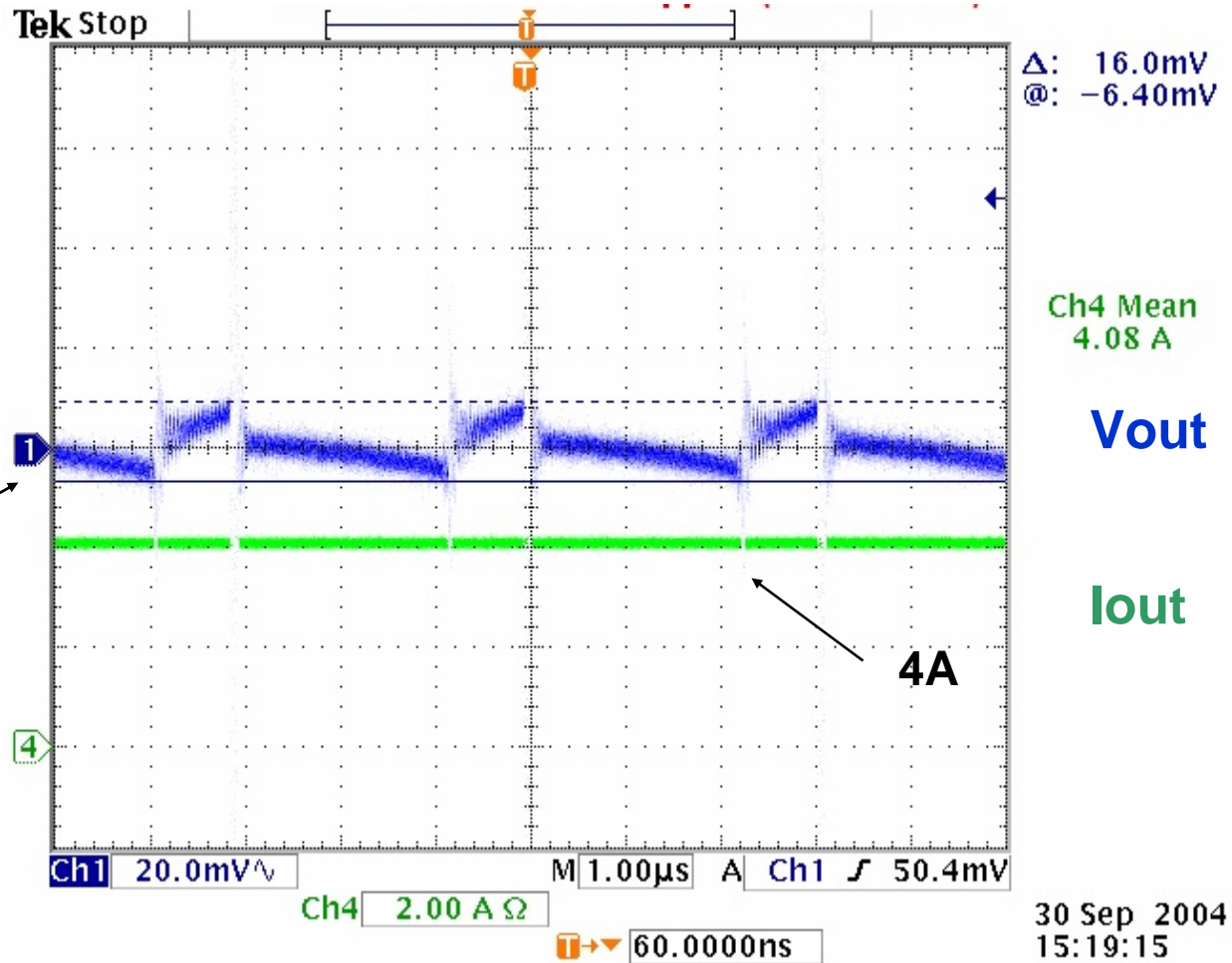




Steady-State Ripple

- $V_{in} = 5V$
- $V_{out} = 1.20V$
- $I_{out} = 4A$

Vout ripple:
+/- 8mV



30 Sep 2004
15:19:15



Efficiency

- **$V_{in} = 5V$**
- **$I_{in} = 1.05A$**

- **$V_{out} = 1.20V$**
- **$I_{out} = 4A$**

- **$P_{in} = 5 * 1.05 = 5.25W$**
- **$P_{out} = 1.2 * 4 = 4.8W$**

- **$P_d = 5.25 - 4.8 = 0.45 W$**

- **$Eff = 91.4\%$**