

PMP5855 Test Results

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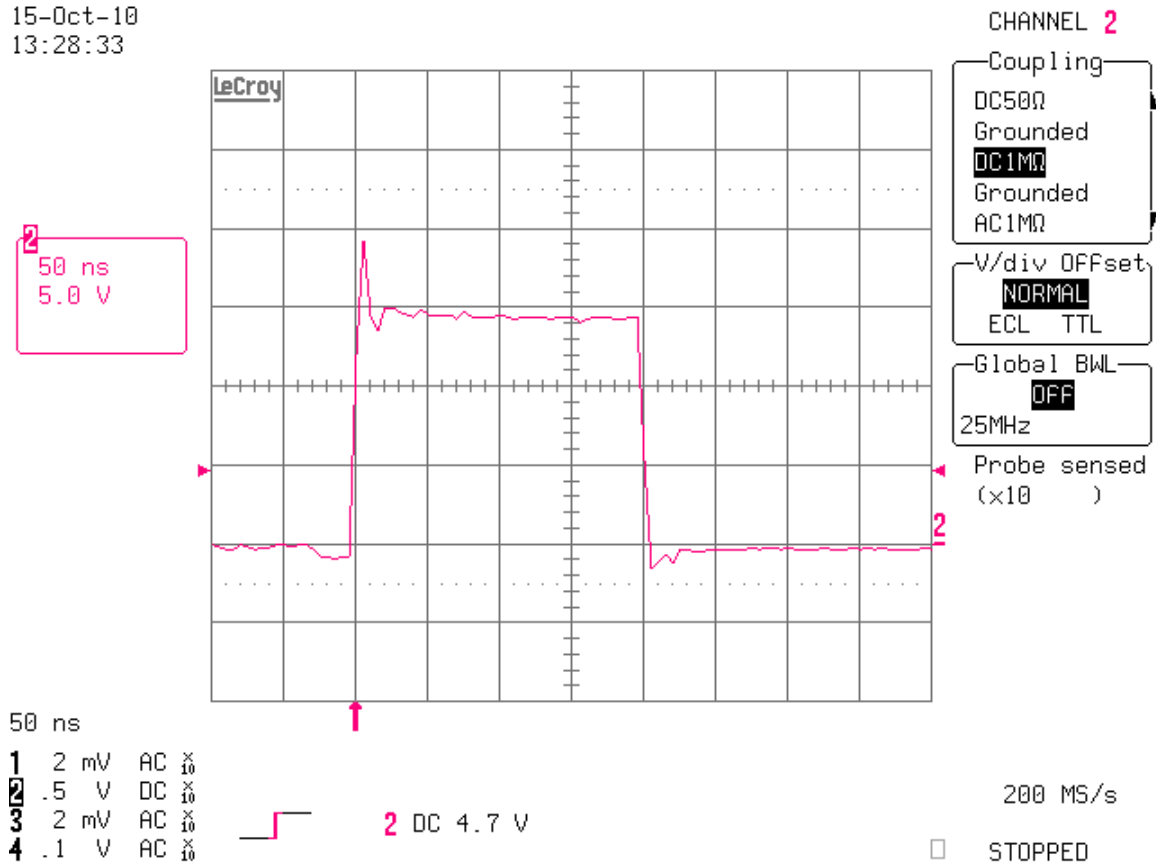
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1 CPU Core Switch Node Waveforms

The following figures show the switch node waveform at full load.

15-Oct-10

13:28:33

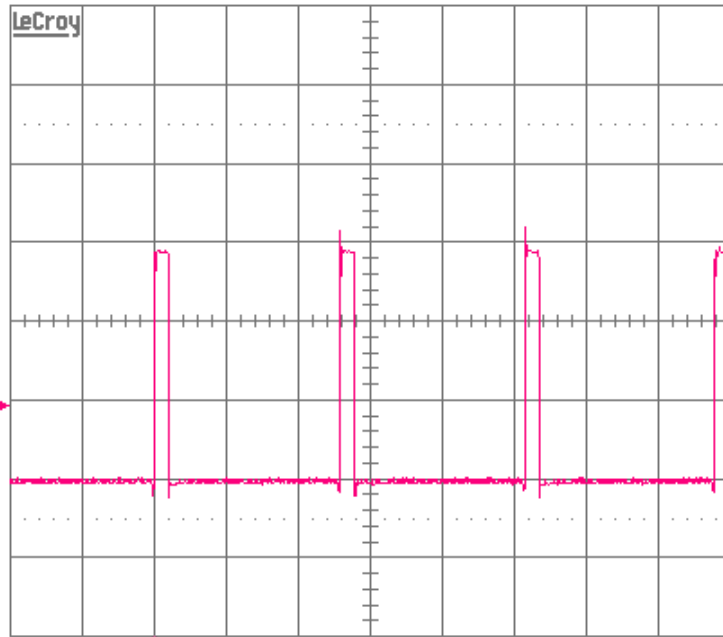


15-Oct-10
13:28:51

Screen Dump stored to D004.TIF on LECROY-1.DIR of

CHANNEL 2

2
1 μ s
5.0 V



Coupling
 DC50 Ω
 Grounded
 DC1M Ω
 Grounded
 AC1M Ω

V/div Offset
 NORMAL
 ECL TTL

Global BWL
 OFF
 25MHz

Probe sensed
 (x10)

- 1 μ s
- 1 2 mV AC $\times 10$
 - 2 .5 V DC $\times 10$
 - 3 2 mV AC $\times 10$
 - 4 .1 V AC $\times 10$



2 DC 4.7 V

200 MS/s

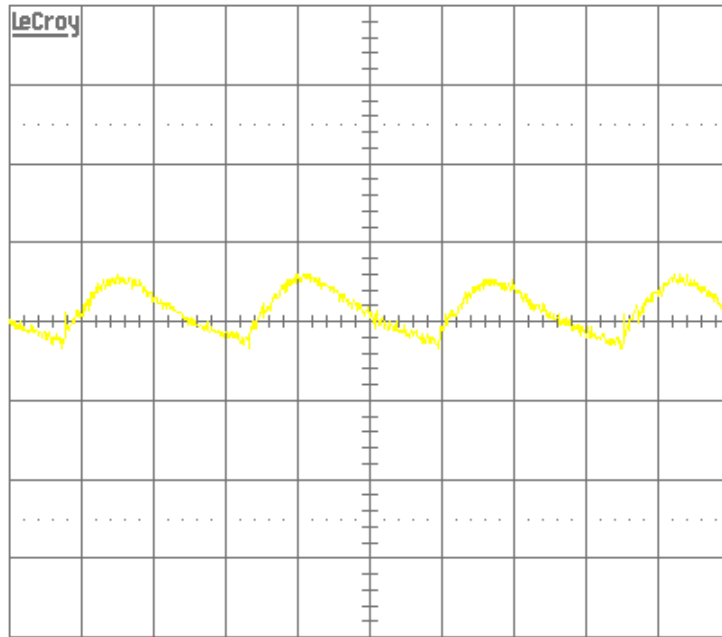
STOPPED

2 CPU Core Output Ripple Voltage

The output ripple voltage is shown in the figure below. The image was taken at Full Load.

15-Oct-10
13:30:49

1
1 μ s
20.0mV



CHANNEL 1

Coupling
DC50 Ω
Grounded
DC1M Ω
Grounded
AC1M Ω

V/div OFFSET
NORMAL
ECL TTL

Global BWL
OFF
25MHz

Probe Atten
x2
x5
x10
x20
x25

1 μ s BWL

1	2 mV	AC	$\times 10$
2	.5 V	DC	$\times 10$
3	2 mV	AC	$\times 10$
4	.1 V	AC	$\times 10$

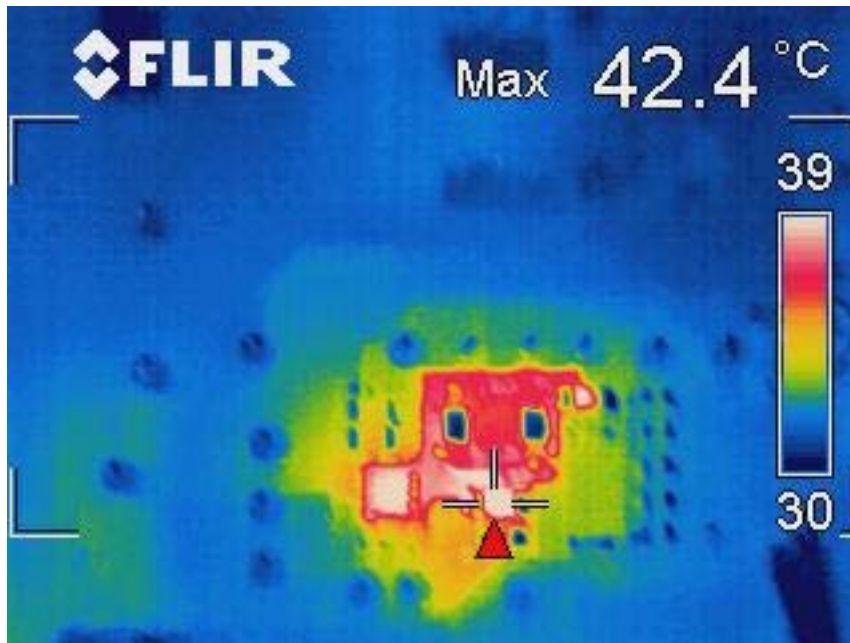
2 DC 4.7 V

200 MS/s

STOPPED

3 CPU Core Thermal Performance

The supply is pictured operating with max VIN at full load.

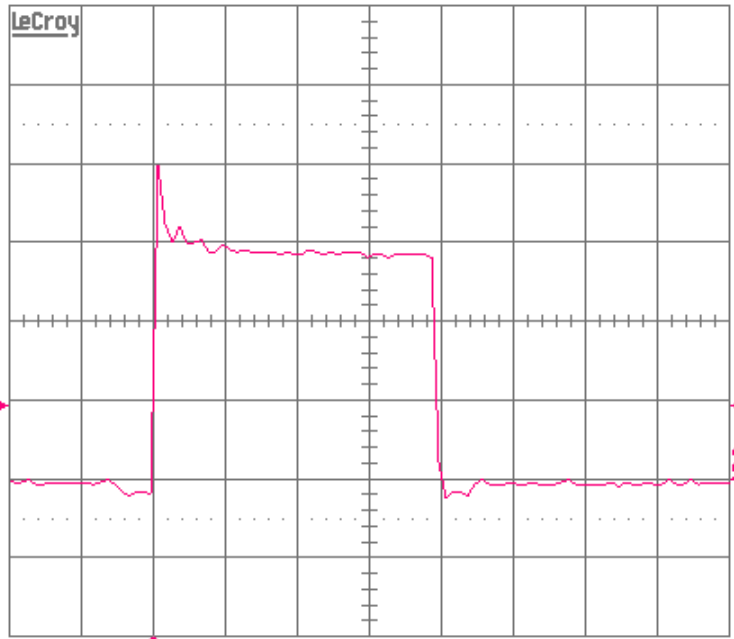


4 GPU Core Switch Node Waveforms

The following figures show the switch node waveform at full load.

15-Oct-10
13:24:36

2
50 ns
5.0 V



CHANNEL 2

Coupling
 DC50Ω
 Grounded
 DC1MΩ
 Grounded
 AC1MΩ

V/div OFFSET
 NORMAL
 ECL TTL

Global BWL
 OFF
 25MHz

Probe sensed (x10)

50 ns

- 1** 2 mV AC $\times 10$
- 2** .5 V DC $\times 10$
- 3** 2 mV AC $\times 10$
- 4** .1 V AC $\times 10$



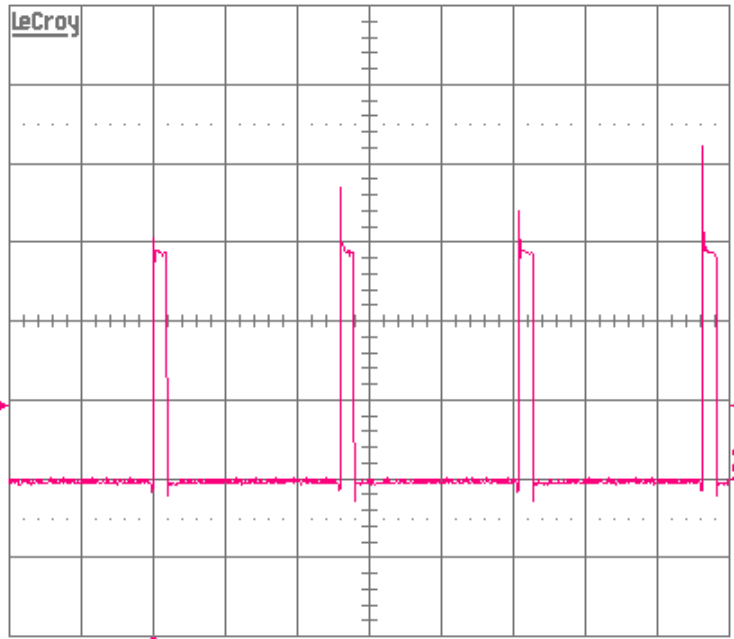
2 DC 4.7 V

200 MS/s

STOPPED

15-Oct-10
13:24:58

2
1 μ s
5.0 V



CHANNEL 2

Coupling
DC50 Ω
Grounded
DC1M Ω
Grounded
AC1M Ω

V/div OFFSET
NORMAL
ECL TTL

Global BWL
OFF
25MHz

Probe sensed
(x10)

- 1 μ s
- 1 2 mV AC $\times 10$
 - 2 .5 V DC $\times 10$
 - 3 2 mV AC $\times 10$
 - 4 .1 V AC $\times 10$

2 DC 4.7 V

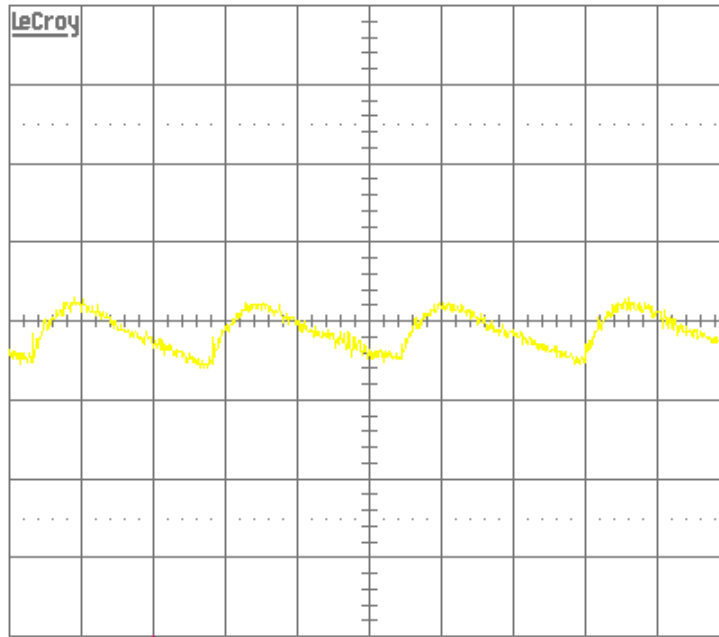
200 MS/s
 STOPPED

5 GPU Core Output Ripple Voltage

The output ripple voltage is shown in the figure below. The image was taken at Full Load.

15-Oct-10
13:25:31

1
1 μ s
20.0mV



CHANNEL 1

Coupling
DC50 Ω
Grounded
DC1M Ω
Grounded
AC1M Ω

V/div Offset
NORMAL
ECL TTL

Global BWL
OFF
25MHz

Probe Atten
x2
x5
x10
x20
x25

	1 μ s	BWL
1	2 mV	AC $\times 10$
2	.5 V	DC $\times 10$
3	2 mV	AC $\times 10$
4	.1 V	AC $\times 10$

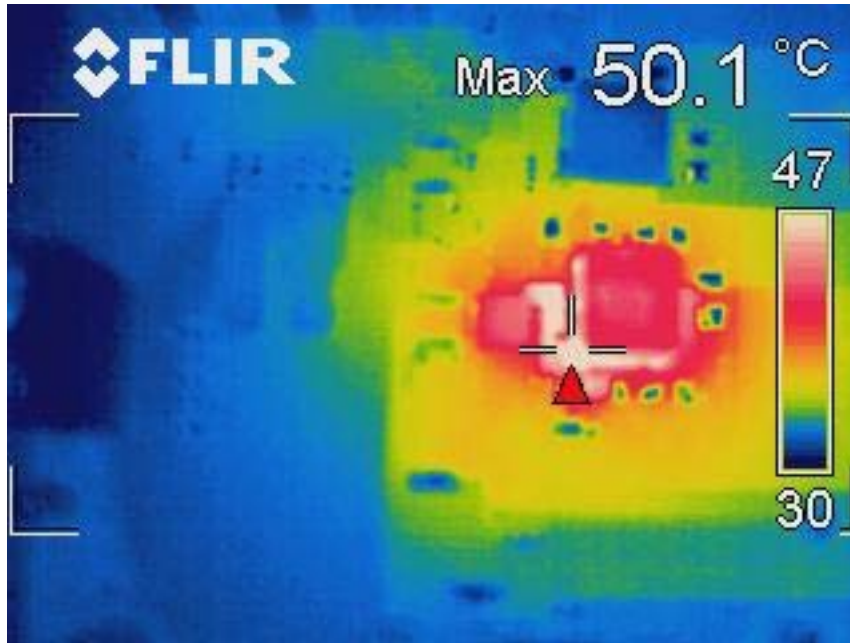
2 DC 4.7 V

200 MS/s

SINGLE

6 GPU Core Thermal Performance

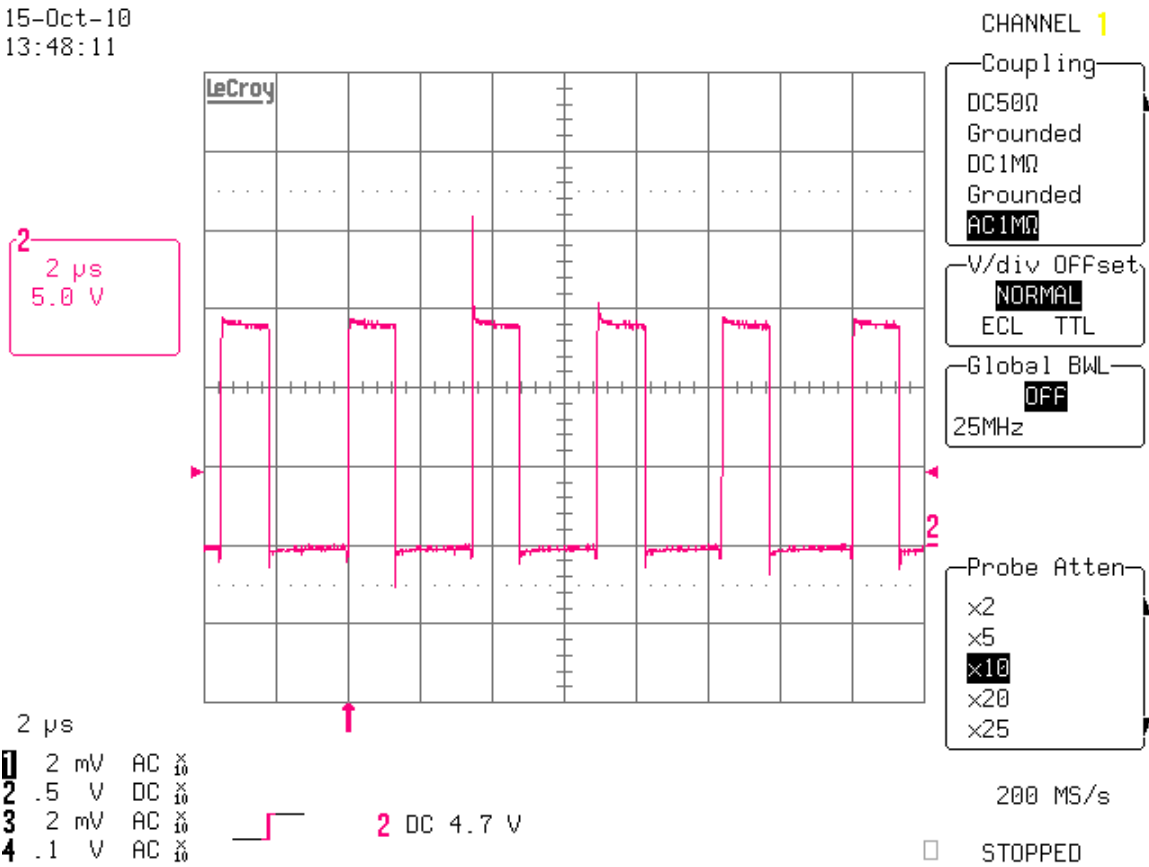
The supply is pictured operating with max VIN at full load.



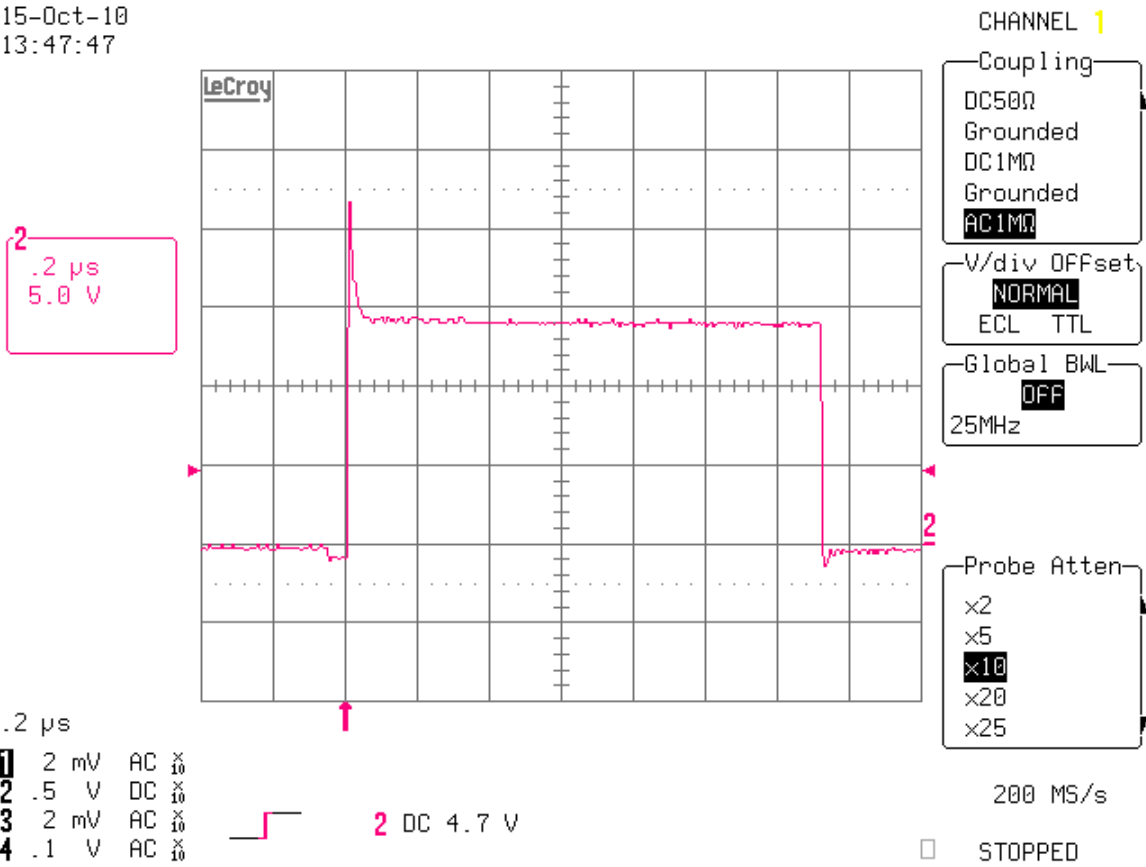
7 5V Switch Node Waveforms

The following figures show the switch node waveform at full load.

15-Oct-10
13:48:11



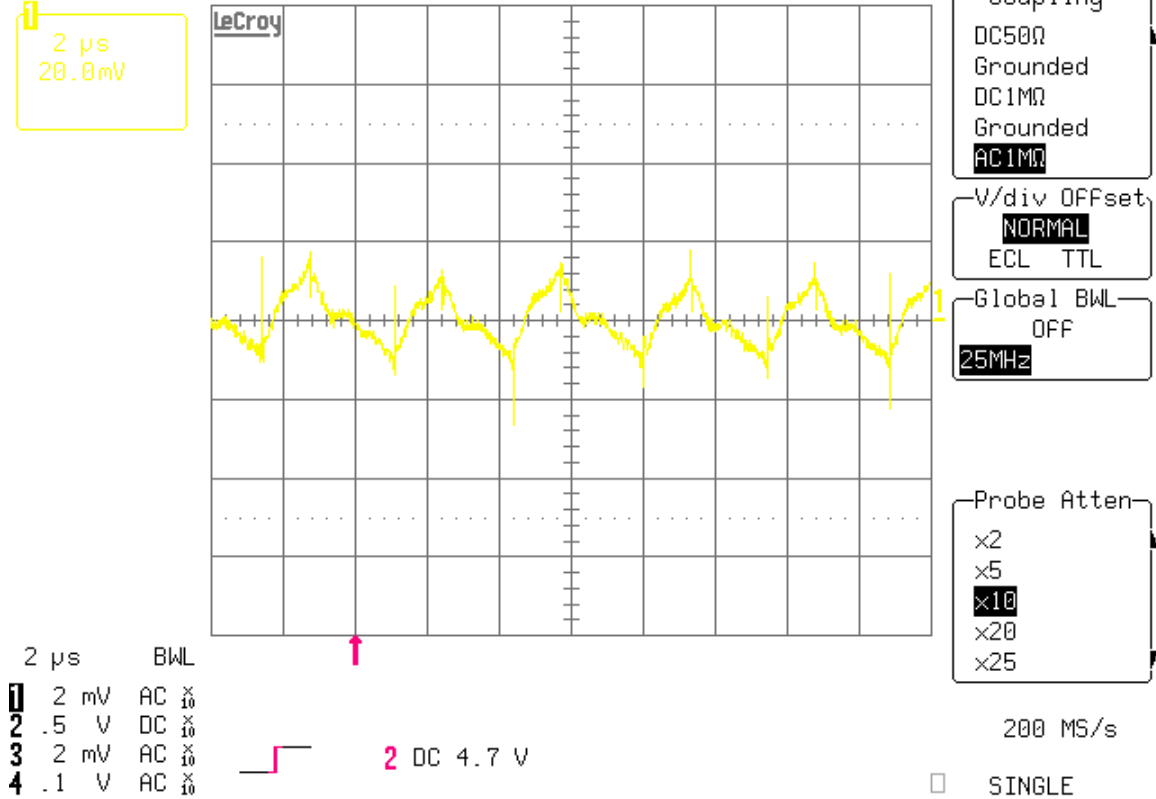
15-Oct-10
13:47:47



8 5V Output Ripple Voltage

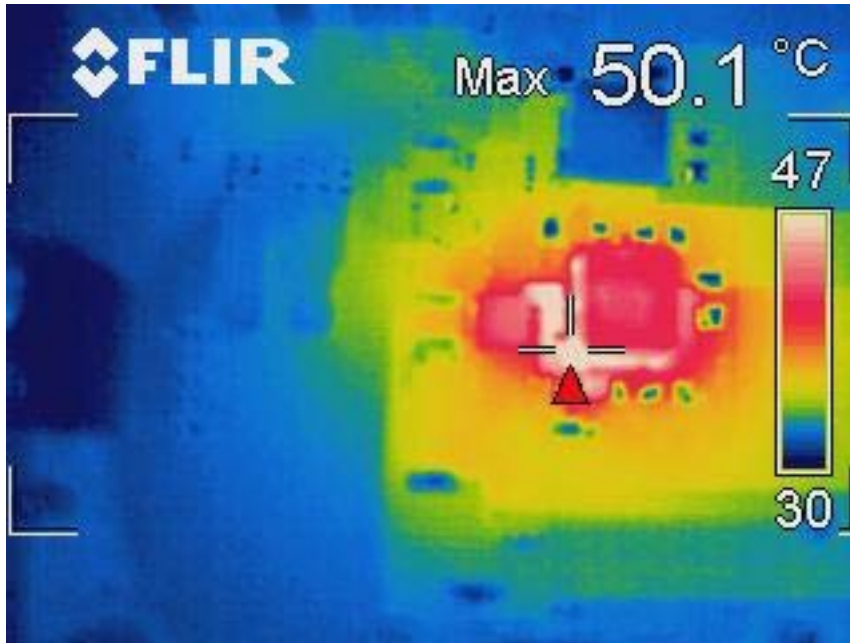
The output ripple voltage is shown in the figure below. The image was taken at Full Load.

15-Oct-10
13:48:39



9 5V Thermal Performance

The supply is pictured operating with max VIN at full load.



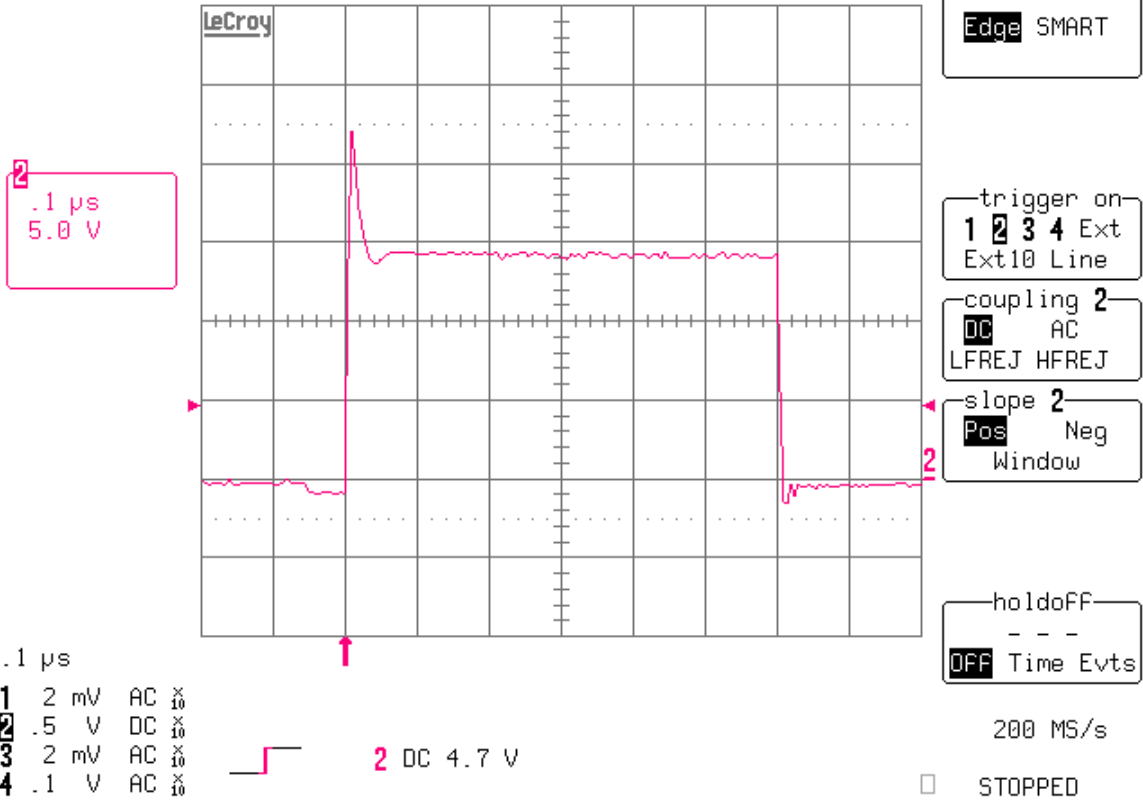
10 3.3V Switch Node Waveforms

The following figures show the switch node waveform at full load.

15-Oct-10
12:38:29

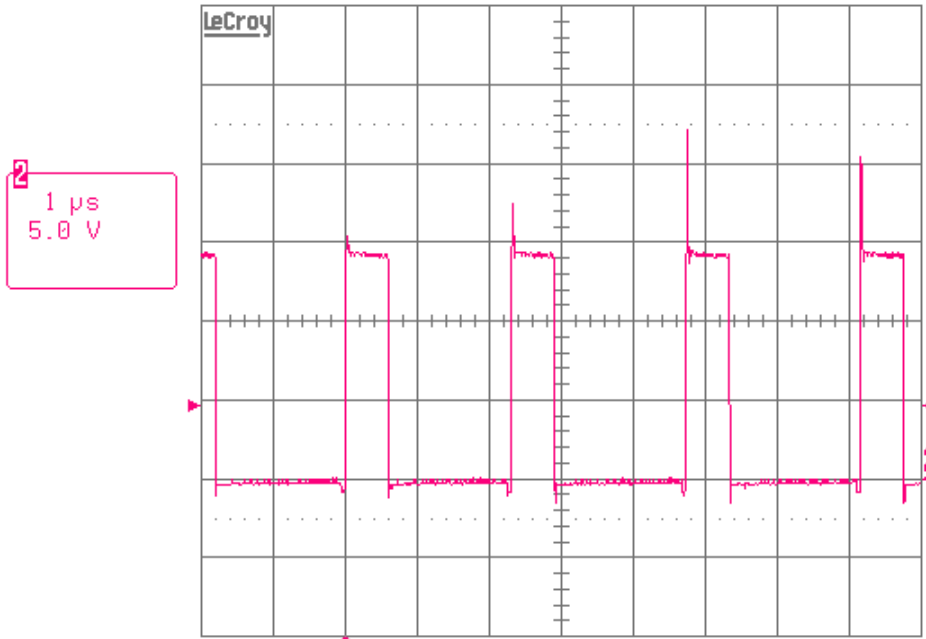
Reading Floppy Disk Drive

TRIGGER SETUP



15-Oct-10
12:39:06

TRIGGER SETUP



Edge SMART

2
1 μs
5.0 V

trigger on
1 2 3 4 Ext
Ext10 Line

coupling 2
DC AC
LFREJ HFREJ

slope 2
Pos Neg
Window

- 1 2 mV AC \times
- 2 .5 V DC \times
- 3 2 mV AC \times
- 4 .1 V AC \times

2 DC 4.7 V

holdoff
- - -
OFF Time Evts

200 MS/s

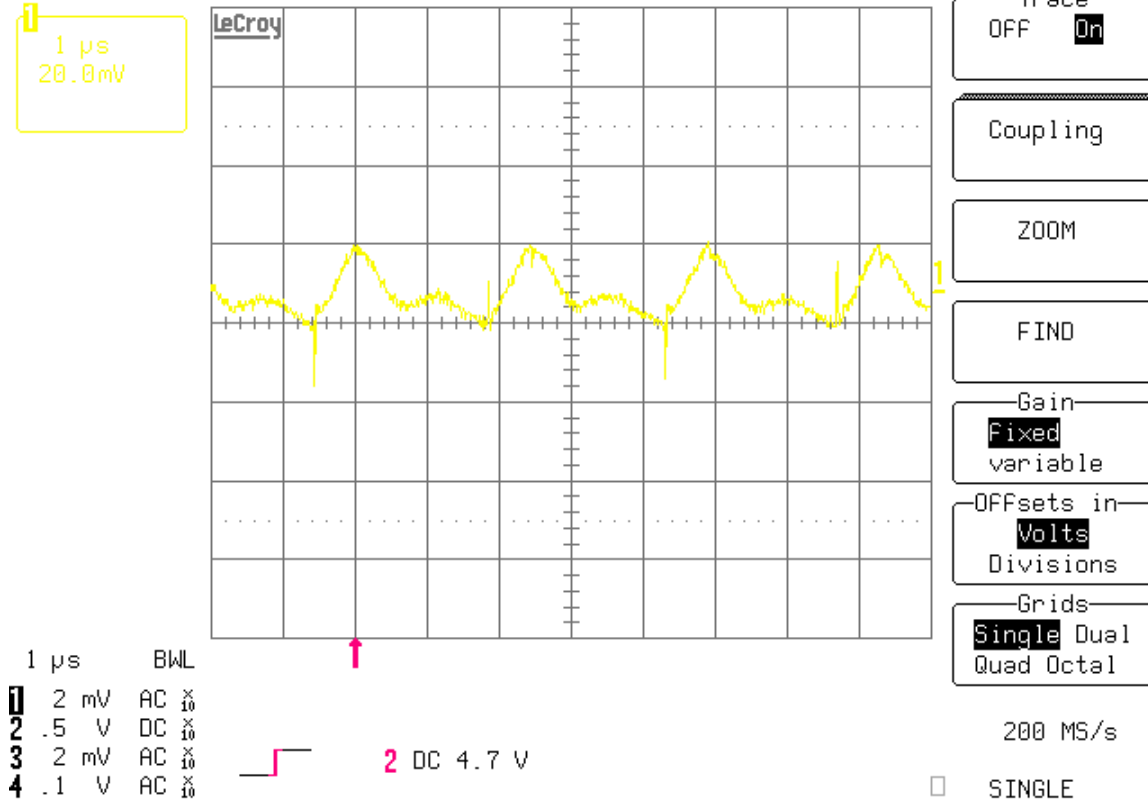
STOPPED

11 3.3V Output Ripple Voltage

The output ripple voltage is shown in the figure below. The image was taken at Full Load.

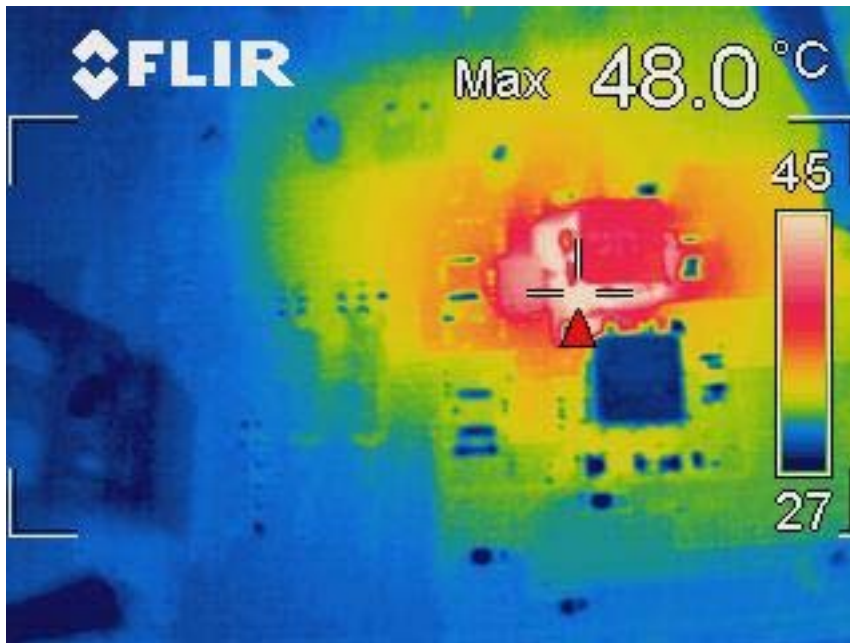
15-Oct-10

12:40:08



12 3.3V Thermal Performance

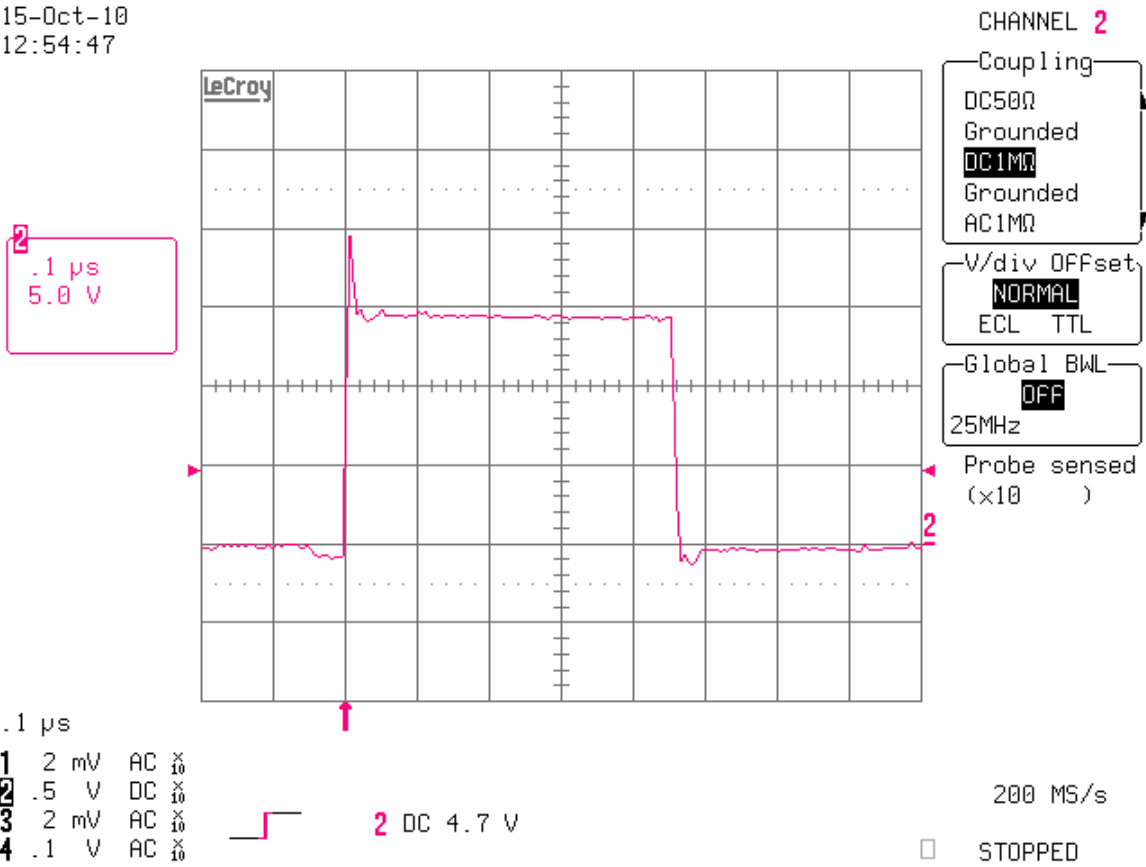
The supply is pictured operating with max VIN at full load.



13 1.8V Switch Node Waveforms

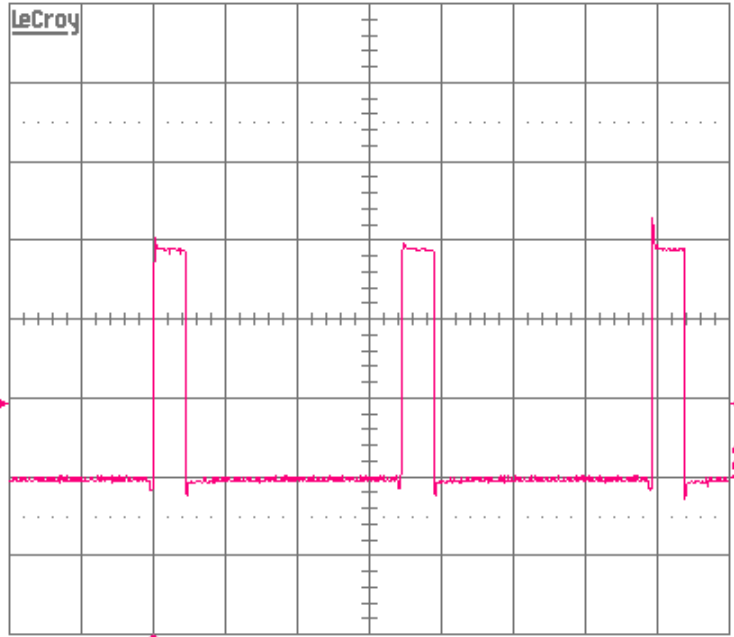
The following figures show the switch node waveform at full load.

15-Oct-10
12:54:47



15-Oct-10
12:55:16

2
1 μ s
5.0 V



CHANNEL 2

Coupling
 DC50 Ω
 Grounded
 DC1M Ω
 Grounded
 AC1M Ω

V/div Offset
 NORMAL
 ECL TTL

Global BWL
 OFF
 25MHz

Probe sensed
 (x10)

- 1 μ s
- 1 2 mV AC $\times 10$
 - 2 .5 V DC $\times 10$
 - 3 2 mV AC $\times 10$
 - 4 .1 V AC $\times 10$

2 DC 4.7 V

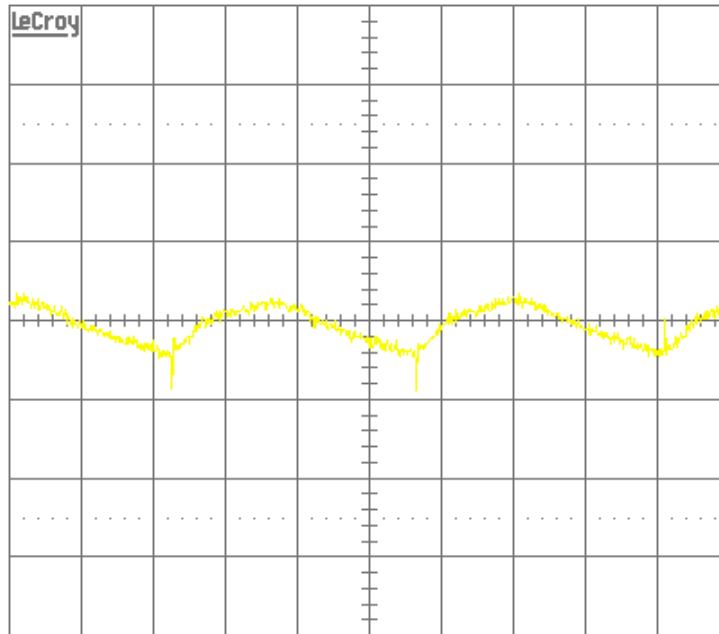
200 MS/s
 STOPPED

14 1.8V Output Ripple Voltage

The output ripple voltage is shown in the figure below. The image was taken at Full Load.

15-Oct-10
12:55:49

1 μ s
20.0mV



CHANNEL 1

- Coupling: DC50 Ω , Grounded, DC1M Ω , Grounded, **AC1M Ω**
- V/div OFFSET: **NORMAL**, ECL, TTL
- Global BWL: OFF, **25MHz**
- Probe Atten: x2, x5, **x10**, x20, x25

	1 μ s	BWL
1	2 mV	AC $\times 10$
2	.5 V	DC $\times 10$
3	2 mV	AC $\times 10$
4	.1 V	AC $\times 10$



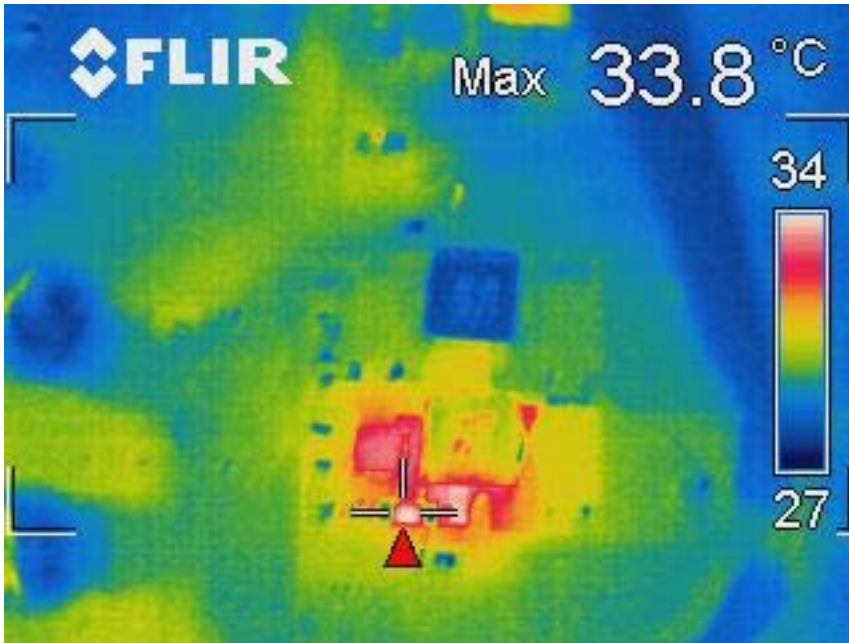
2 DC 4.7 V

200 MS/s

SINGLE

15 1.8V Thermal Performance

The supply is pictured operating with max VIN at full load.

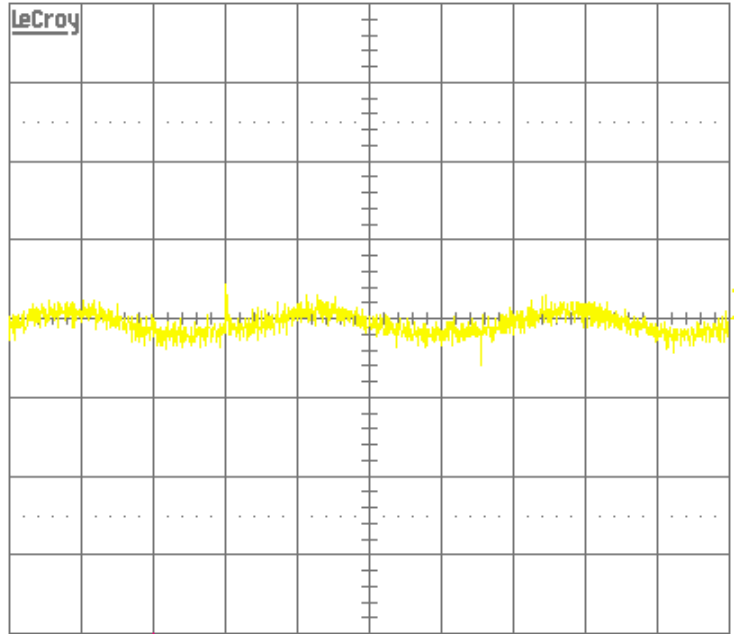


16 1.5 Output Ripple Voltage

The output ripple voltage is shown in the figure below. The image was taken at Full Load.

15-Oct-10
13:23:15

1 $1 \mu\text{s}$
 20.0mV



CHANNEL 1

Trace
OFF On

Coupling

ZOOM

FIND

Gain
Fixed variable

Offsets in
Volts Divisions

Grids
Single Dual
Quad Octal

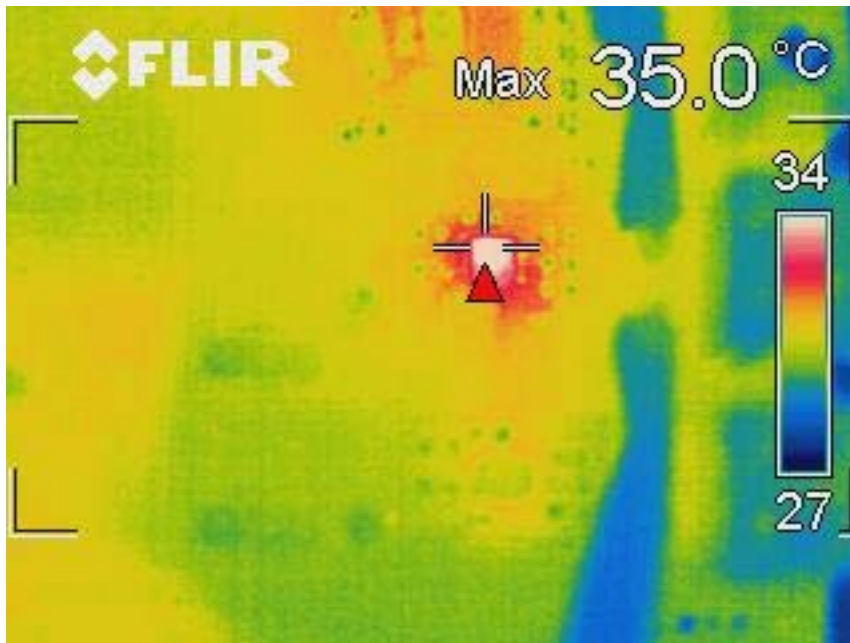
- 1 2 mV AC $\times 10$
- 2 .5 V DC $\times 10$
- 3 2 mV AC $\times 10$
- 4 .1 V AC $\times 10$

2 DC 4.7 V

200 MS/s
 SINGLE

17 1.5V Thermal Performance

The supply is pictured operating with max VIN at full load.

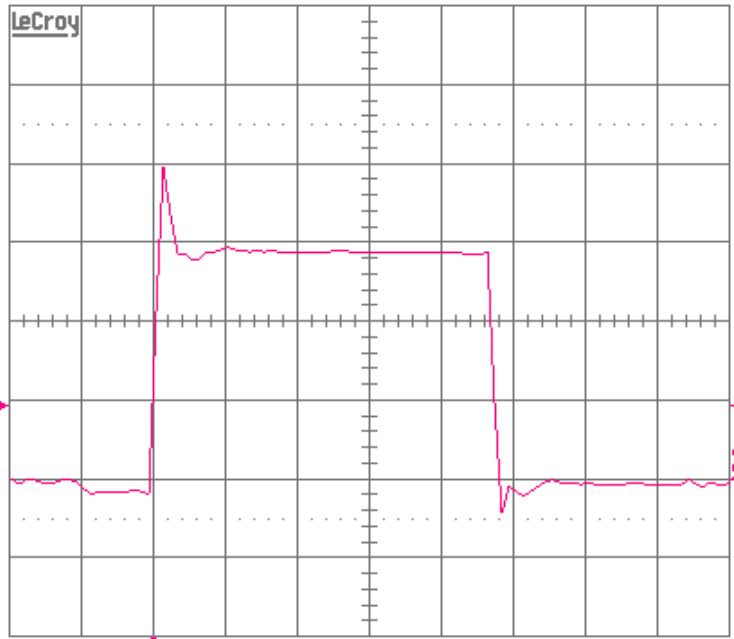


18 1.05V Switch Node Waveforms

The following figures show the switch node waveform at full load.

15-Oct-10
12:49:34

2
50 ns
5.0 V



CHANNEL 1

Coupling
DC50Ω
Grounded
DC1MΩ
Grounded
AC1MΩ

V/div Offset
NORMAL
ECL TTL

Global BWL
OFF
25MHz

Probe Atten
x2
x5
x10
x20
x25

50 ns

- 1 2 mV AC $\times 10$
- 2 .5 V DC $\times 10$
- 3 2 mV AC $\times 10$
- 4 .1 V AC $\times 10$



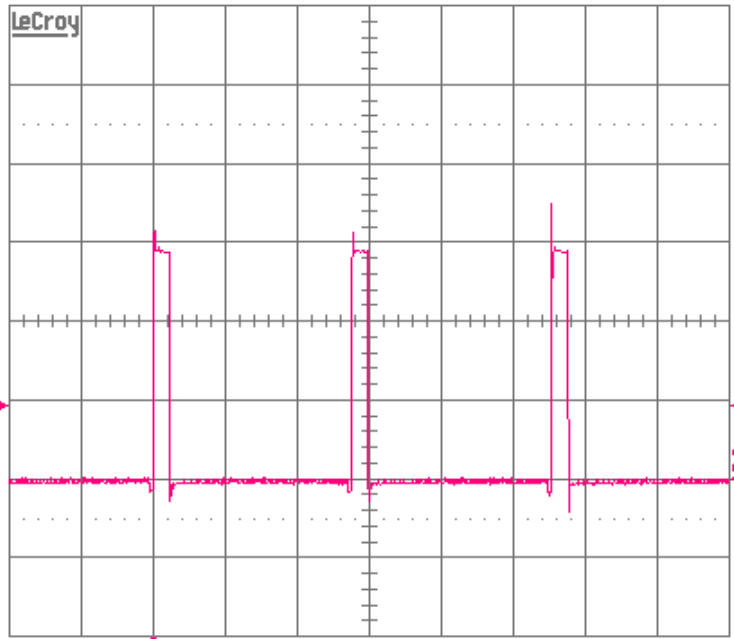
2 DC 4.7 V

200 MS/s

STOPPED

15-Oct-10
12:49:58

2
1 μ s
5.0 V



CHANNEL 1

Coupling
DC50 Ω
Grounded
DC1M Ω
Grounded
AC1M Ω

V/div Offset
NORMAL
ECL TTL

Global BWL
OFF
25MHz

Probe Atten
x2
x5
x10
x20
x25

1 μ s

1	2 mV	AC	$\times 10$
2	.5 V	DC	$\times 10$
3	2 mV	AC	$\times 10$
4	.1 V	AC	$\times 10$



2 DC 4.7 V

200 MS/s

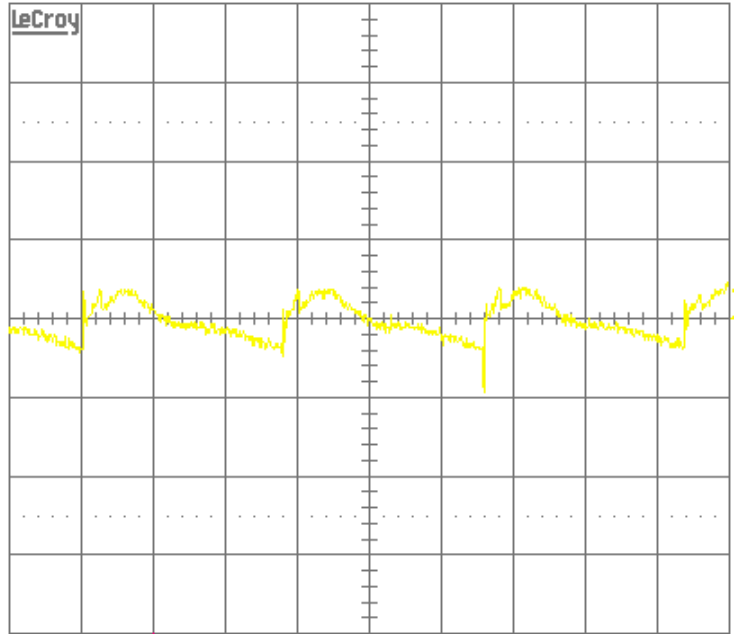
STOPPED

19 1.05V Output Ripple Voltage

The output ripple voltage is shown in the figure below. The image was taken at Full Load.

15-Oct-10
12:50:30

1 μ s
20.0mV



CHANNEL 1

Coupling
DC50 Ω
Grounded
DC1M Ω
Grounded
AC1M Ω

V/div OFFSET
NORMAL
ECL TTL

Global BWL
OFF
25MHz

Probe Atten
x2
x5
x10
x20
x25

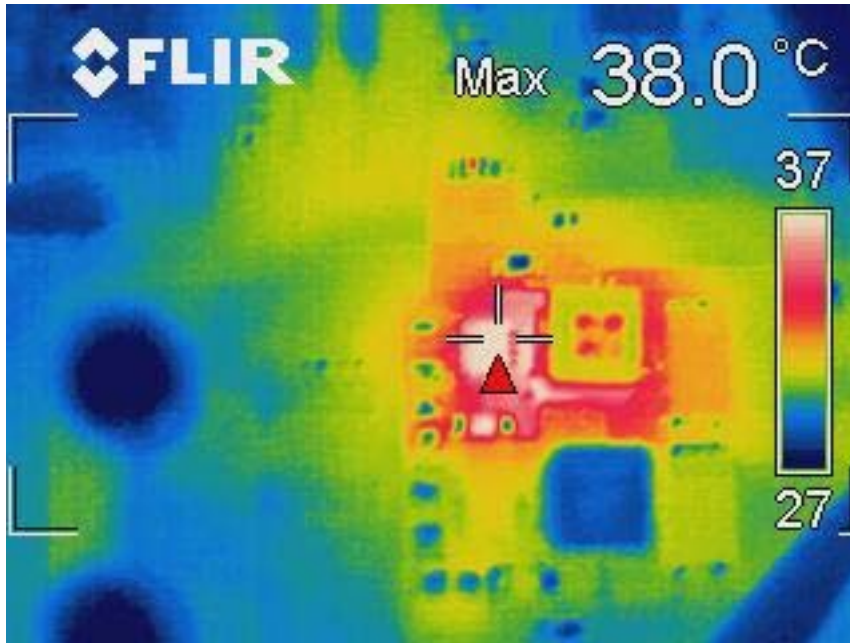
	1 μ s	BWL
1	2 mV	AC $\times 10$
2	.5 V	DC $\times 10$
3	2 mV	AC $\times 10$
4	.1 V	AC $\times 10$

2 DC 4.7 V

200 MS/s
 SINGLE

20 1.05V Thermal Performance

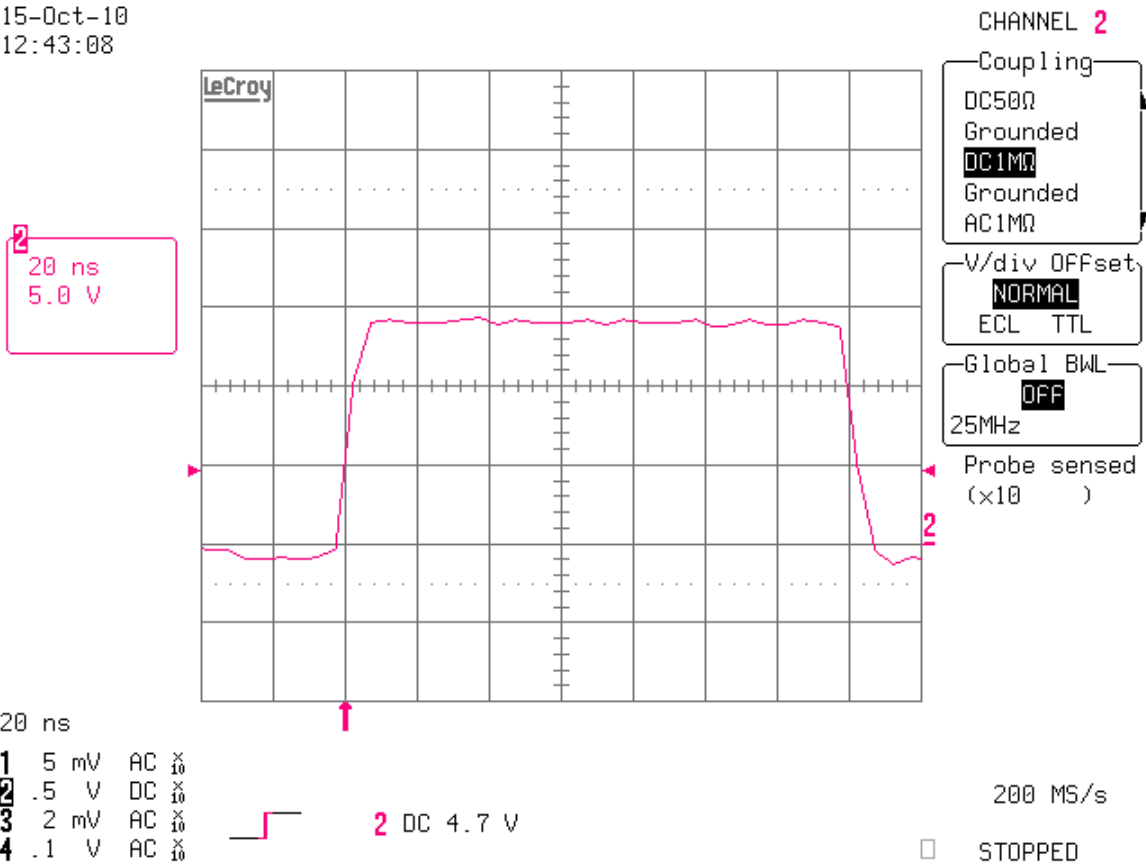
The supply is pictured operating with max VIN at full load.



21 1.2V Switch Node Waveforms

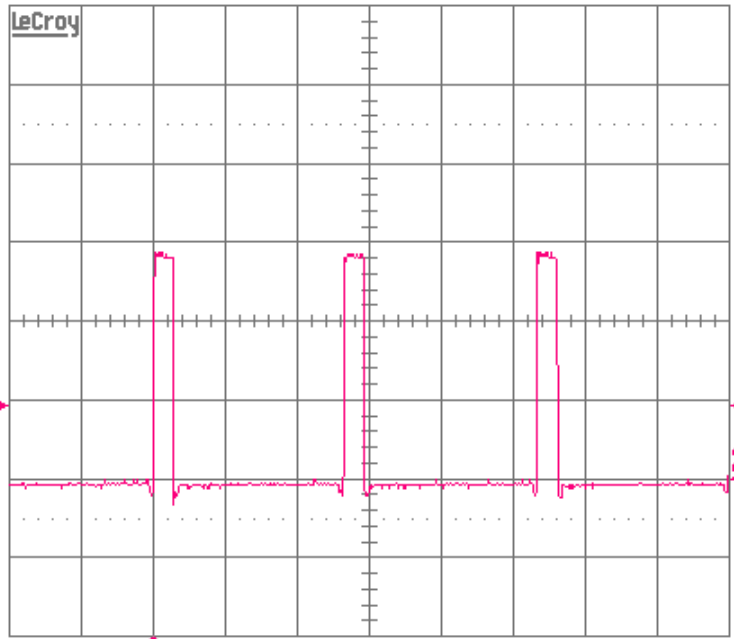
The following figures show the switch node waveform at full load.

15-Oct-10
12:43:08



15-Oct-10
12:43:39

2
.5 μ s
5.0 V



CHANNEL 2

- Coupling
 - DC50 Ω
 - Grounded
 - DC1M Ω**
 - Grounded
 - AC1M Ω
- V/div Offset
 - NORMAL**
 - ECL TTL
- Global BWL
 - OFF**
 - 25MHz

Probe sensed (x10)

.5 μ s

- 1** 5 mV AC $\times 10$
- 2** .5 V DC $\times 10$
- 3** 2 mV AC $\times 10$
- 4** .1 V AC $\times 10$



2 DC 4.7 V

200 MS/s

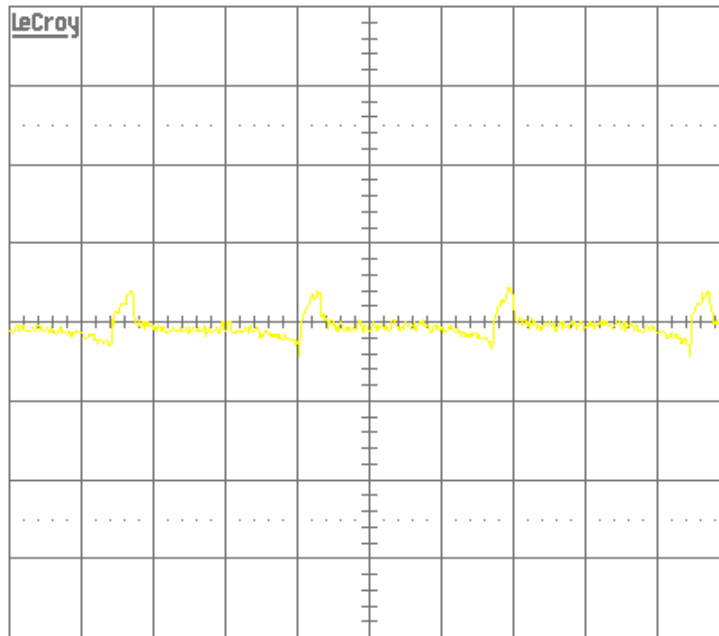
STOPPED

22 1.2V Output Ripple Voltage

The output ripple voltage is shown in the figure below. The image was taken at Full Load.

15-Oct-10
12:44:58

1
.5 μ s
20.0mV



CHANNEL 1

Coupling
DC50 Ω
Grounded
DC1M Ω
Grounded
AC1M Ω

V/div Offset
NORMAL
ECL TTL

Global BWL
OFF
25MHz

Probe Atten
x2
x5
x10
x20
x25

		BWL
1	2 mV	AC $\times 10$
2	.5 V	DC $\times 10$
3	2 mV	AC $\times 10$
4	.1 V	AC $\times 10$

2 DC 4.7 V

200 MS/s

SINGLE

23 1.2V Thermal Performance

The supply is pictured operating with max VIN at full load.

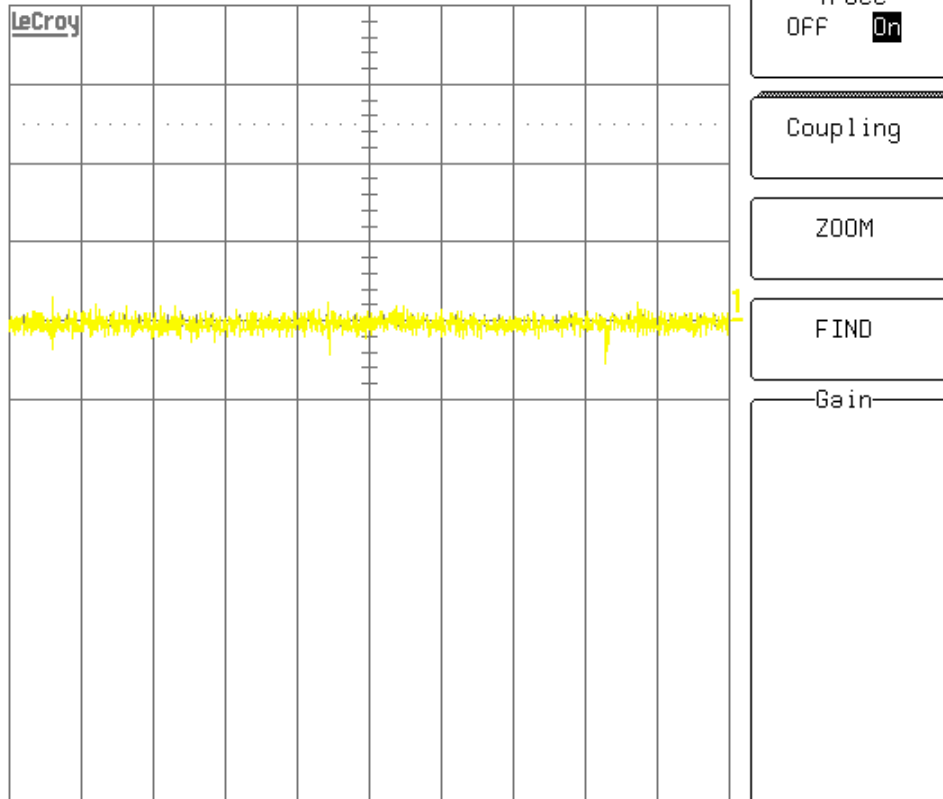


24 0.9V Output Ripple Voltage

The output ripple voltage is shown in the figure below. The image was taken at Full Load.

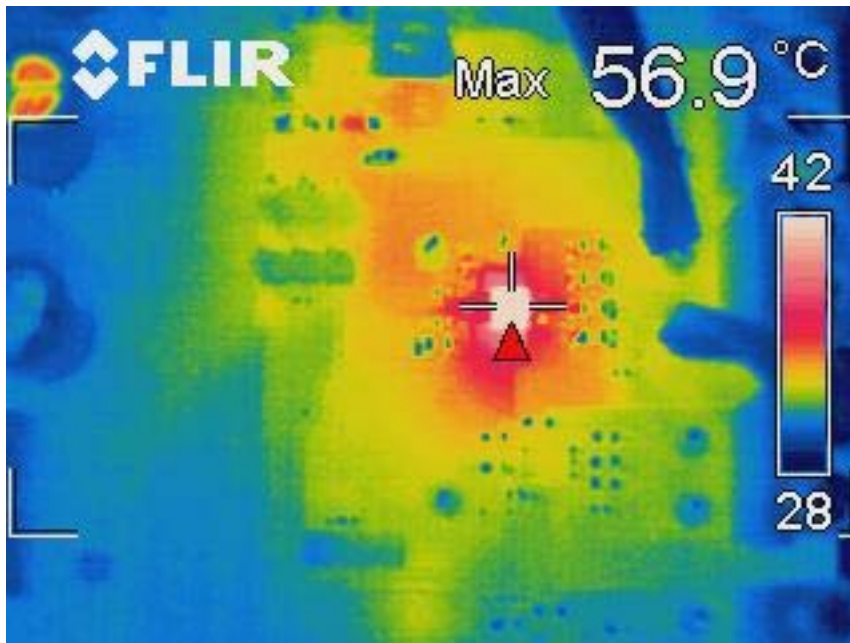
15-Oct-10
12:59:55

1
1 μ s
20.0mV



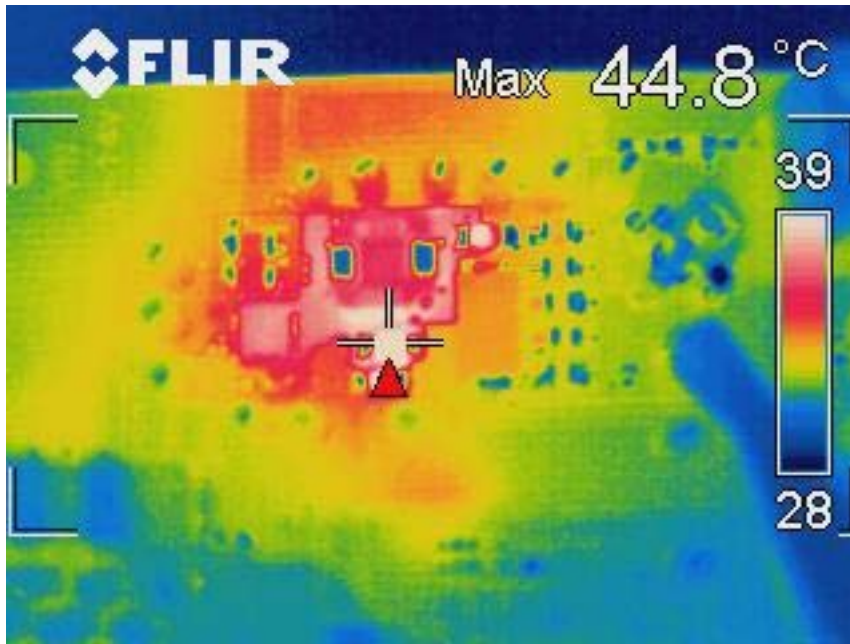
25 0.9V Thermal Performance

The supply is pictured operating with max VIN at full load.



26 1.05V ram Thermal Performance

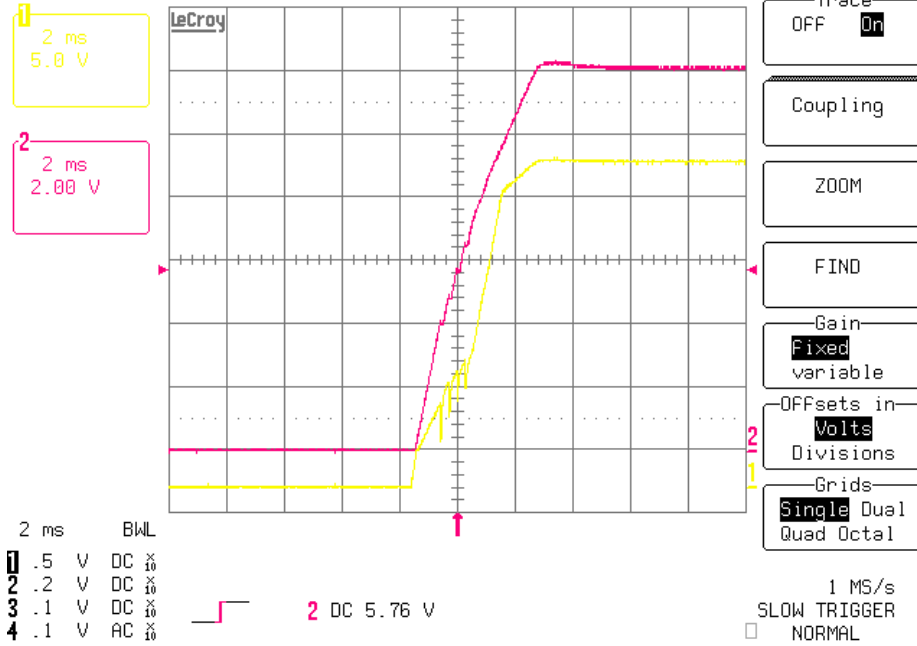
The supply is pictured operating with max VIN at full load.



27 Hot Swap

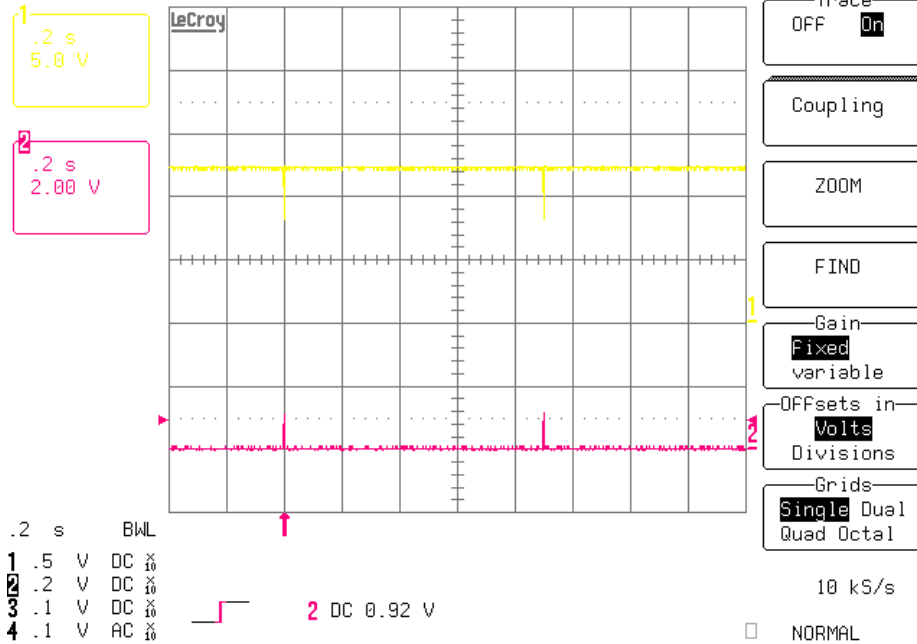
VIN on Input A. Shows VOUT CH1 and MOSFET Voltage CH2

28-Oct-10
14:26:52



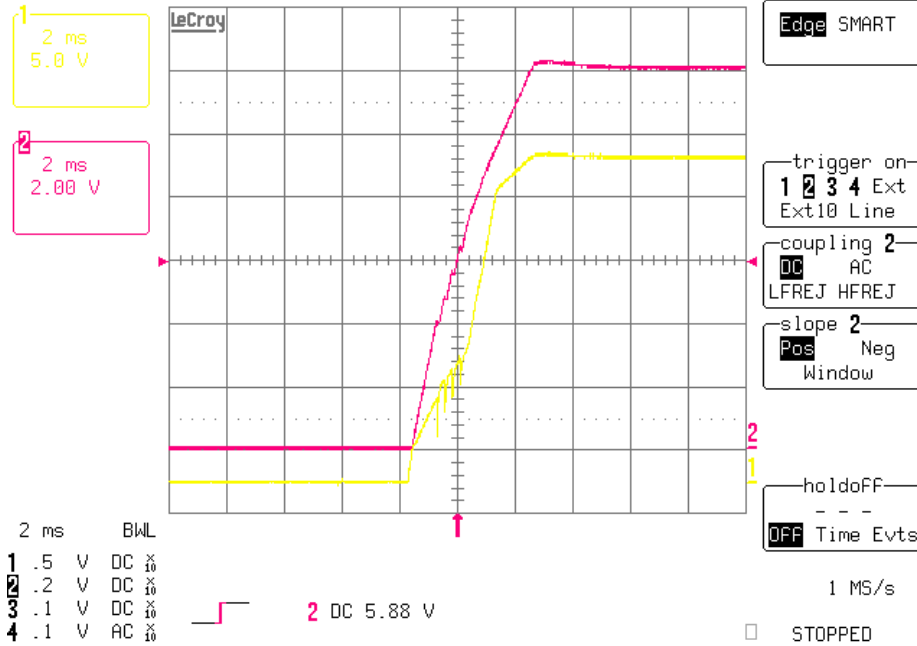
VIN on Input A with output shorted. Shows retry A

28-Oct-10
14:32:14



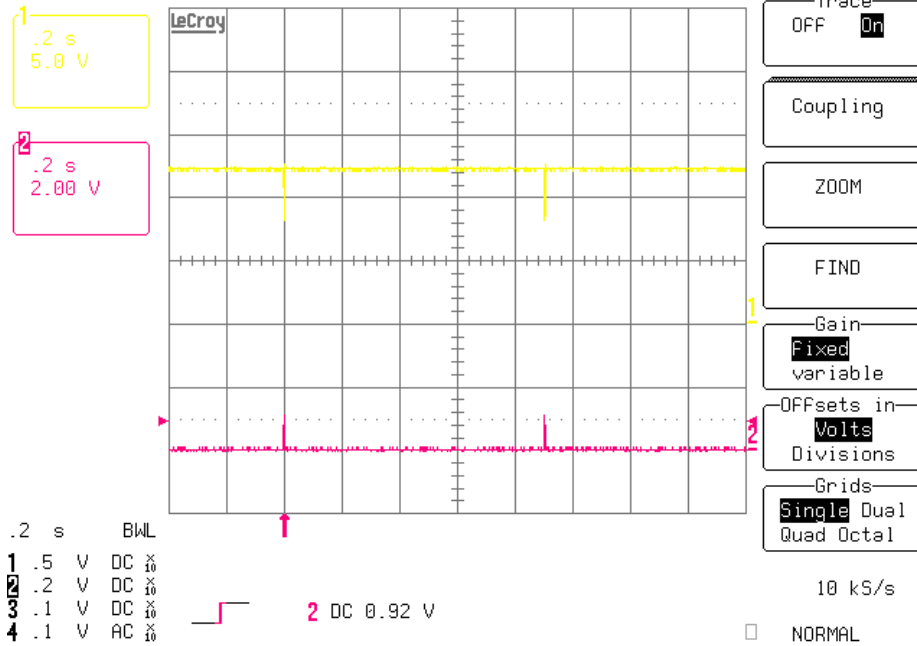
VIN on Input B. Shows VOUT CH1 and MOSFET Voltage CH2

28-Oct-10
14:41:41



VIN on Input B with output shorted. Shows retry B

28-Oct-10
14:39:29



28 Sequencer

Power up sequence

28-Oct-10
16:19:41

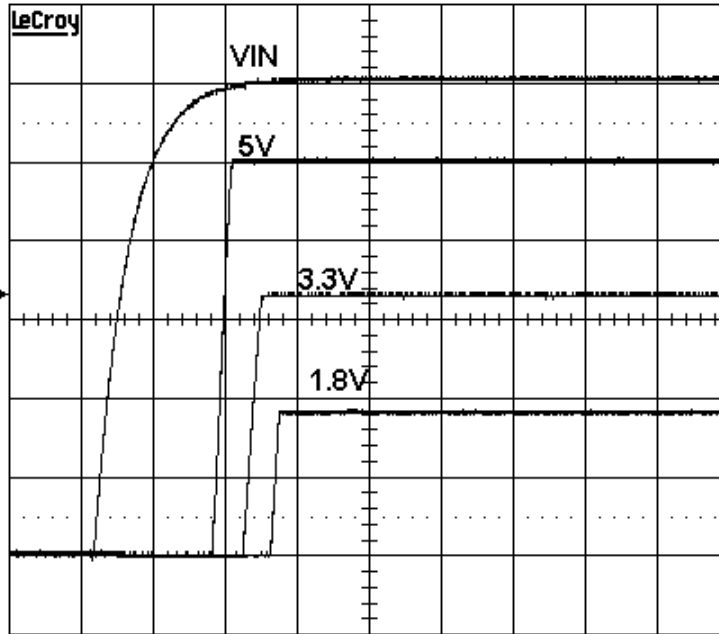
TRIGGER SETUP

1
10 ms
2.00 V

2
10 ms
1.00 V

3
10 ms
1.00 V

4
10 ms
1.00 V



Edge SMART

trigger on
1 2 3 4 Ext
Ext10 Line

coupling 2
DC AC
LFREJ HFREJ

slope 2
Pos Neg
Window

holdoff
Time Evts

	10 ms	BWL
1	.2 V	DC \times 10
2	.1 V	DC \times 10
3	.1 V	DC \times 10
4	.1 V	DC \times 10

2 DC 3.32 V

250 kS/s

STOPPED

28-Oct-10
16:26:06

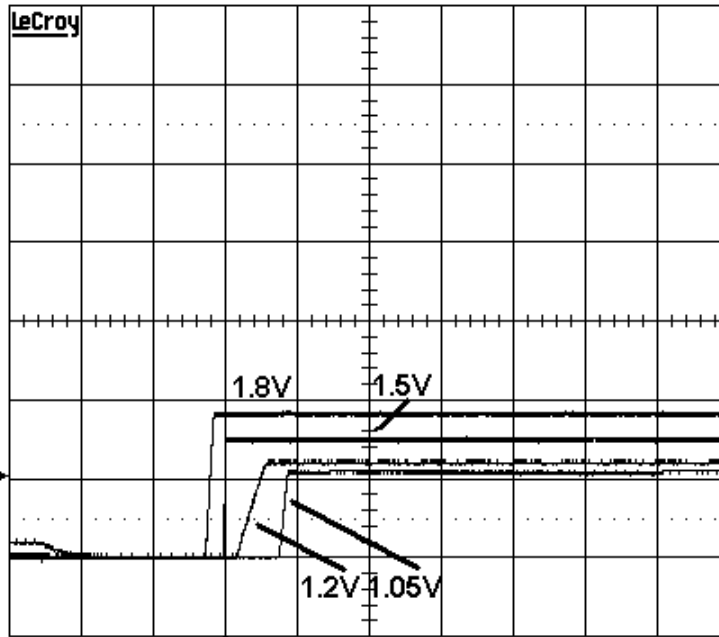
1
10 ms
1.00 V

2
10 ms
1.00 V

3
10 ms
1.00 V

4
10 ms
1.00 V

	10 ms	BWL
1	.1 V	DC $\times \frac{10}{10}$
2	.1 V	DC $\times \frac{10}{10}$
3	.1 V	DC $\times \frac{10}{10}$
4	.1 V	DC $\times \frac{10}{10}$



CHANNEL 1

Trace
OFF On

Coupling

ZOOM

FIND

Gain
Fixed variable

Offsets in
Volts Divisions

Grids
Single Dual
Quad Octal

2 DC 1.06 V

250 kS/s
SLOW TRIGGER
 NORMAL

28-Oct-10
16:30:28

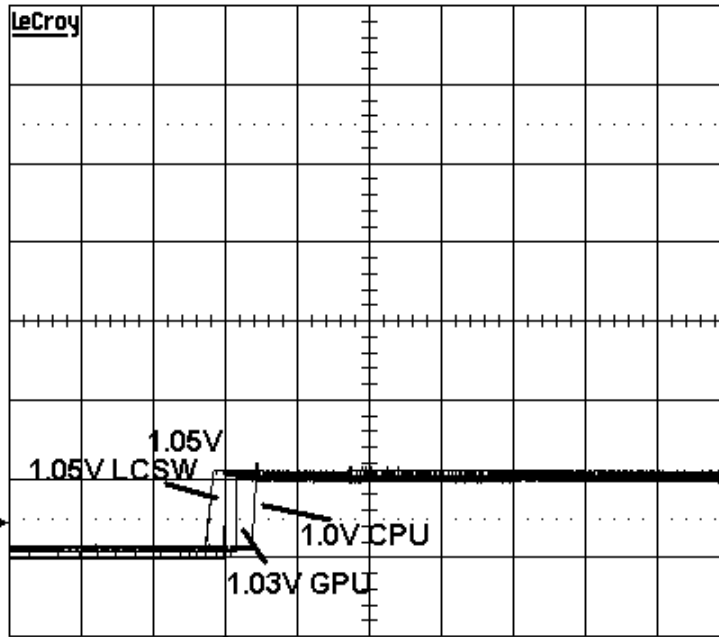
1
10 ms
1.00 V

2
10 ms
1.00 V

3
10 ms
1.00 V

4
10 ms
1.00 V

	10 ms	BWL
1	.1 V	DC $\times \frac{10}{10}$
2	.1 V	DC $\times \frac{10}{10}$
3	.1 V	DC $\times \frac{10}{10}$
4	.1 V	DC $\times \frac{10}{10}$



2 DC 0.46 V

CHANNEL 1

Trace
OFF On

Coupling

ZOOM

FIND

Gain
 Fixed
variable

Offsets in
 Volts
Divisions

Grids
 Single Dual
Quad Octal

250 kS/s
SLOW TRIGGER
 NORMAL

28-Oct-10
16:31:53

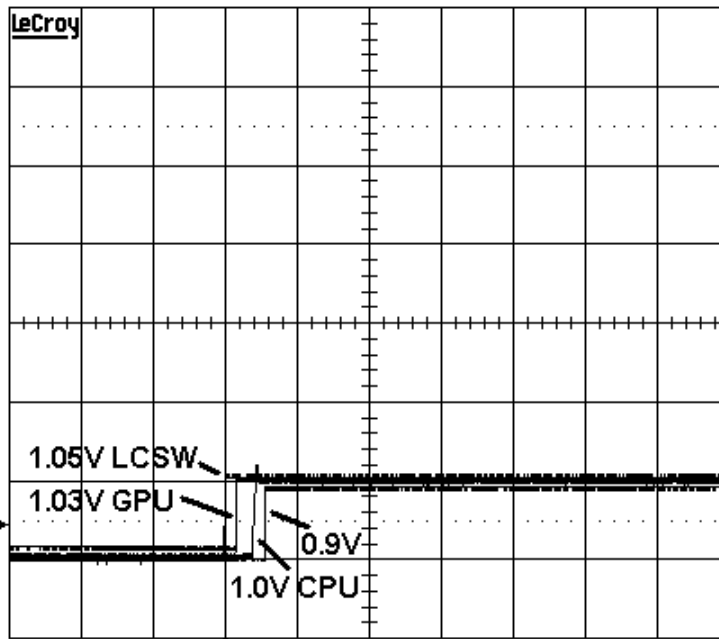
1
10 ms
1.00 V

2
10 ms
1.00 V

3
10 ms
1.00 V

4
10 ms
1.00 V

	10 ms	BWL
1	.1 V	DC $\times \frac{10}{10}$
2	.1 V	DC $\times \frac{10}{10}$
3	.1 V	DC $\times \frac{10}{10}$
4	.1 V	DC $\times \frac{10}{10}$



2 DC 0.46 V

CHANNEL 1

Trace
OFF On

Coupling

ZOOM

FIND

Gain
Fixed variable

Offsets in
Volts Divisions

Grids
Single Dual
Quad Octal

250 kS/s

NORMAL

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