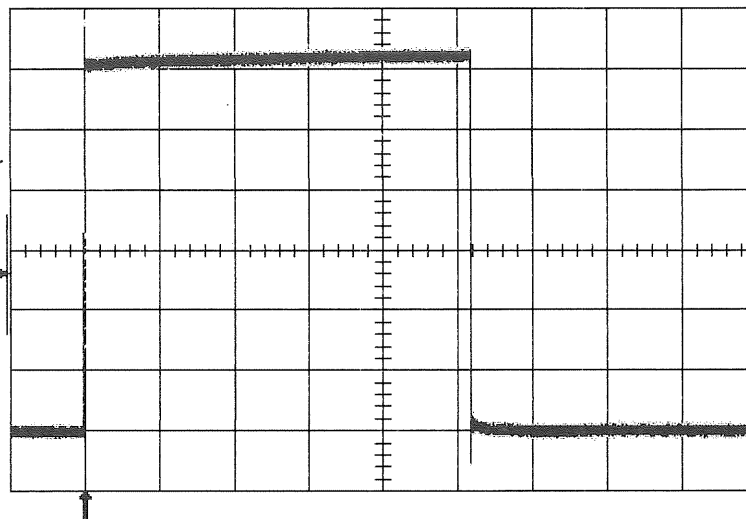


19-May-08
16:35:24

*Timing Solu
4032A
at ADC input
w/ active probe*

5 ps
0.50 V
21 swps



MEASURE

OFF
Parameters

mode
Std Voltage
Std Time
Custom
List by nT
Pass

statistics
OFF On

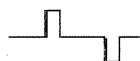
on trace
3

From
0.00 div
Track OFF On

to
10.00 div
400000 pts

	24 sweeps:	average	low	high	sigma
period(3)					
width(3)		25.9911 ps	25.9909	25.9913	0.0001
rise(3)		1.61 ns	1.57	1.67	0.03
Fall(3)		2.13 ns	2.10	2.19	0.02
delay(3)		-0.11 ns	-0.21	0.09	0.08

1 1 V 500
2 10 mV DC
3 50 mV DC
4 1 V 500



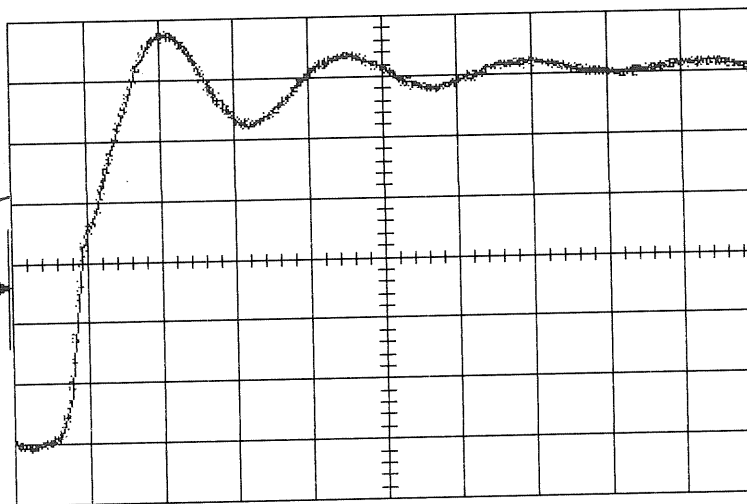
3 DC 1.30 V ± 0.50 V

NORMAL

19-May-08
16:40:45

*Timing Solu
4032A
at ADC input
w/ active probe*

2 ns
0.50 V
12 swps



MEASURE

OFF
Parameters

mode
Std Voltage
Std Time
Custom
List by nT
Pass

statistics
OFF On

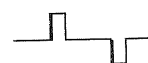
on trace
3

From
0.00 div
Track OFF On

to
10.00 div
160 pts

	12 sweeps:	average	low	high	sigma
period(3)					
width(3)					
rise(3)		1.64 ns	1.53	1.88	0.14
Fall(3)					
delay(3)		-0.14 ns	-0.24	-0.05	0.06

1 1 V 500
2 10 mV DC
3 50 mV DC
4 1 V 500



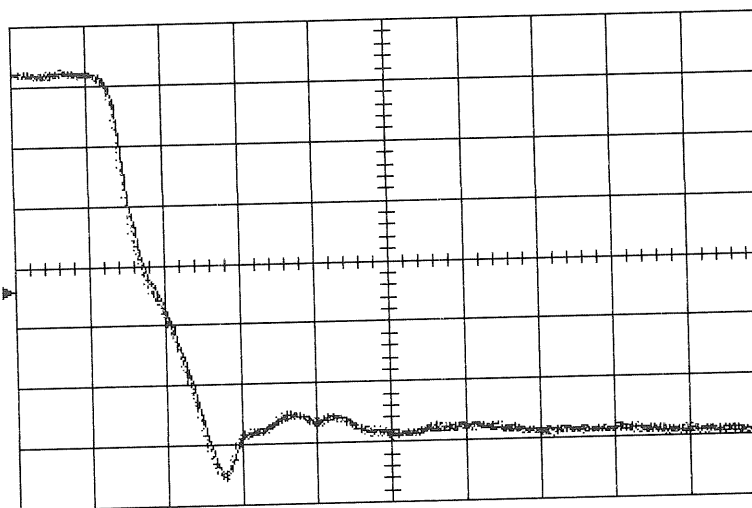
3 DC 1.30 V ± 0.50 V

NORMAL

19-May-08
16:42:48

firing Soln
U032A
at ADC input
w/ active probe

2 ns
0.50 V
14 swps



TRIGGER SETUP

Edge SMART

trigger on
1 2 3 4 Ext
Ext5 Line

coupling 3
DC AC LFREJ
HFREJ HF

slope 3
Pos Neg
Window

14 sweeps:

	average	low	high	sigma
period(3)	---	---	---	---
width(3)	---	---	---	---
rise(3)	---	---	---	---
Fall(3)	2.08 ns	2.05	2.10	0.02
delay(3)	-0.65 ns	-0.71	-0.59	0.04

- 1 1 V 500
- 2 10 mV DC $\times 10$
- 3 50 mV DC $\times 10$
- 4 1 V 500



3 DC 1.30 V

NORMAL ☐

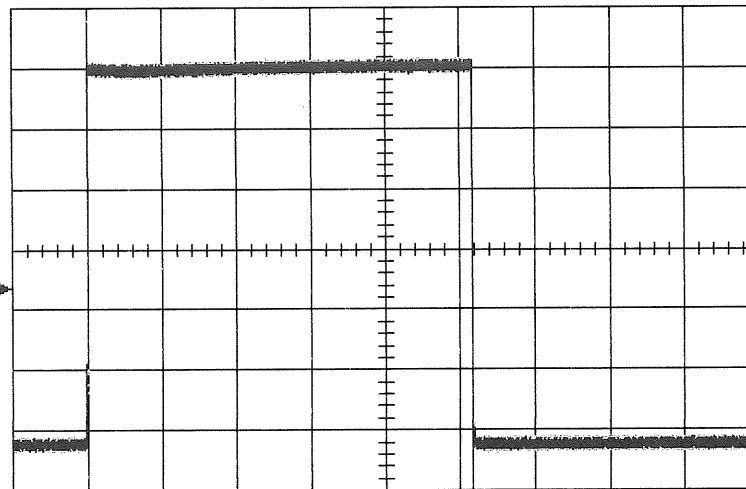
holdoff

OFF Time Evts

19-May-08
16:50:08

Timing Soln
4032A
direct to
scope

5 ps
0.50 V
13 swps



13 sweeps: average low high sigma
period(3) ---
width(3) 25.9910 ps 25.9907 25.9911 0.0001
rise(3) 1.49 ns 1.45 1.51 0.02
fall(3) 2.03 ns 2.01 2.06 0.01
delay(3) 0.06 ns 0.04 0.08 0.01

1 1 V 50Ω
2 10 mV DC 50Ω
3 0.5 V 50Ω
4 1 V 50Ω



3 DC 1.30 V

NORMAL

TRIGGER SETUP

Edge SMART

trigger on
1 2 3 4 Ext
Ext5 Line

coupling 3
DC AC LFREJ
HFREJ HF

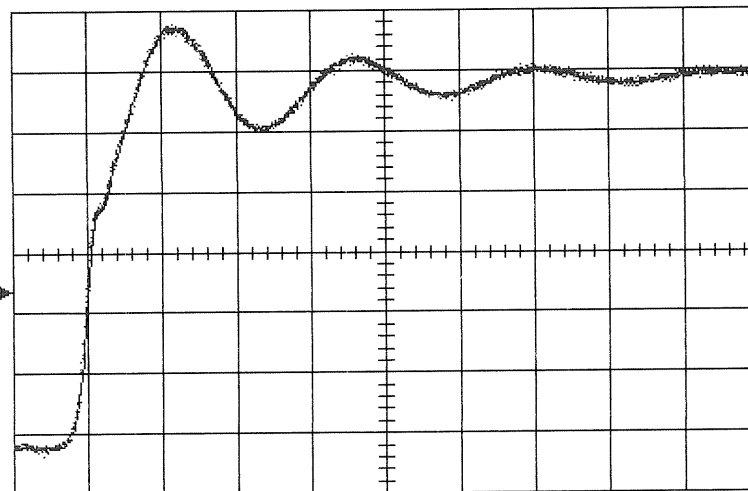
slope 3
Pos Neg
Window

holdoff
OFF Time Evts

19-May-08
16:49:20

Timing Soln
4032A
direct into
scope

2 ns
0.50 V
14 swps



14 sweeps: average low high sigma
period(3) ---
width(3) ---
rise(3) 1.46 ns 1.42 1.50 0.02
fall(3) ---
delay(3) 0.07 ns 0.04 0.12 0.02

1 1 V 50Ω
2 10 mV DC 50Ω
3 0.5 V 50Ω
4 1 V 50Ω



3 DC 1.30 V

NORMAL

TRIGGER SETUP

Edge SMART

trigger on
1 2 3 4 Ext
Ext5 Line

coupling 3
DC AC LFREJ
HFREJ HF

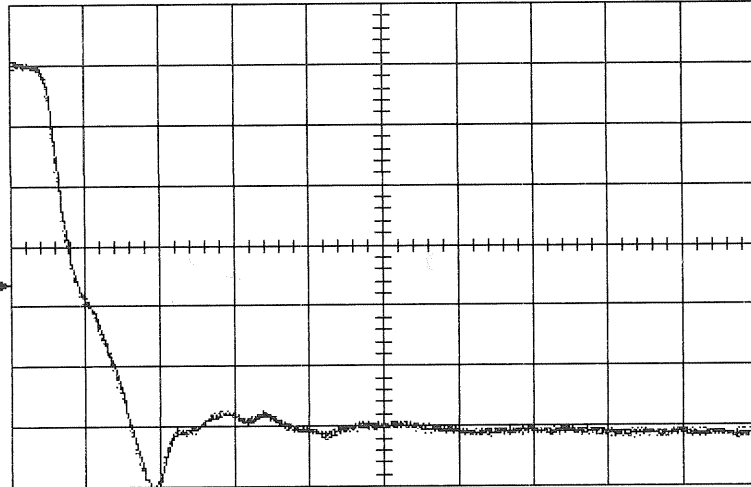
slope 3
Pos Neg
Window

holdoff
OFF Time Evts

19-May-08
16:51:13

*Timing Solv
4032A
direct into scope*

2 ns
0.50 V
11 swps



11 sweeps: average low high sigma

period(3)	- - -	- - -	- - -	- - -
width(3)	- - -	- - -	- - -	- - -
rise(3)	- - -	- - -	- - -	- - -
Fall(3)	2.00 ns	1.96	2.02	0.02
delay(3)	-0.43 ns	-0.48	-0.38	0.03

- 1 1 V 50Ω
- 2 10 mV DC
- 3 .5 V 50Ω
- 4 1 V 50Ω



3 DC 1.30 V

NORMAL

TRIGGER SETUP

Edge SMART

trigger on
1 2 3 4 Ext
Ext5 Line

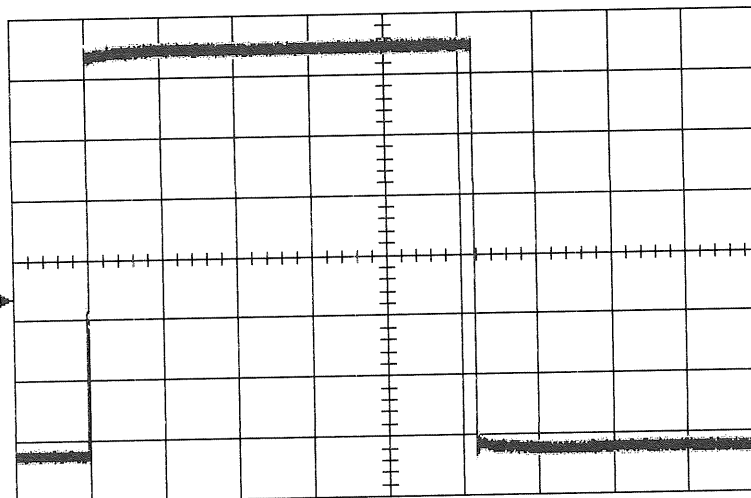
coupling 3
DC AC LFREJ
HFREJ HF

slope 3
Pos Neg
Window

holdoff
- - -
OFF Time Evts

19-May-08
16:59:02
RAL 1PPS
at 1ADC
input
w/ active
probe

5 ps
0.50 V
14 swps



14 sweeps: average low high sigma

period(3)	---	---	---	---
width(3)	25.9908 ps	25.9907	25.9910	0.0001
rise(3)	5.36 ns	5.03	5.71	0.19
Fall(3)	1.73 ns	1.70	1.76	0.02
delay(3)	0.19 ns	0.15	0.23	0.03

- 1 1 V 50Ω
- 2 10 mV DC %
- 3 50 mV DC %
- 4 1 V 50Ω



3 DC 1.30 V

NORMAL

TRIGGER SETUP

Edge SMART

trigger on
1 2 3 4 Ext
Ext5 Line

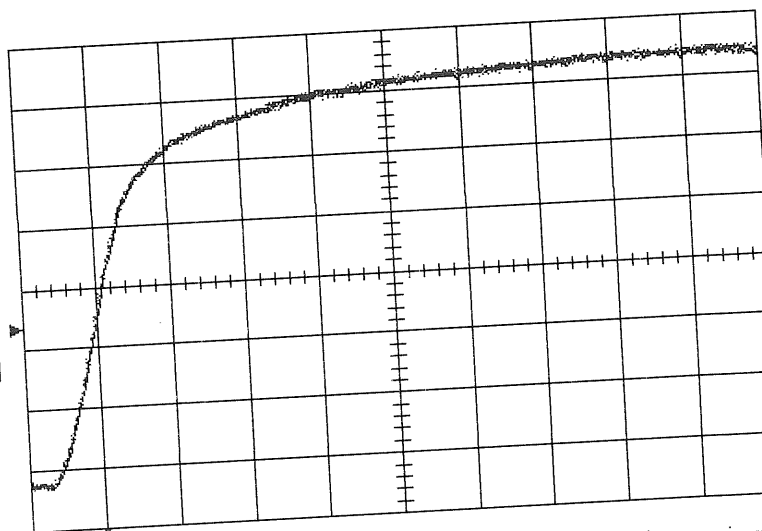
coupling 3
DC AC LFREJ
HFREJ HF

slope 3
Pos Neg
Window

holdoff
OFF Time Evts

19-May-08
17:00:15
RAL 1PPS
@ 1ADC
input w/ active
probe

2 ns
0.50 V
12 swps



12 sweeps: average low high sigma

period(3)	---	---	---	---
width(3)	---	---	---	---
rise(3)	4.74 ns	4.28	5.11	0.24
Fall(3)	---	---	---	---
delay(3)	0.17 ns	0.14	0.20	0.02

- 1 1 V 50Ω
- 2 10 mV DC %
- 3 50 mV DC %
- 4 1 V 50Ω



3 DC 1.30 V

NORMAL

TRIGGER SETUP

Edge SMART

trigger on
1 2 3 4 Ext
Ext5 Line

coupling 3
DC AC LFREJ
HFREJ HF

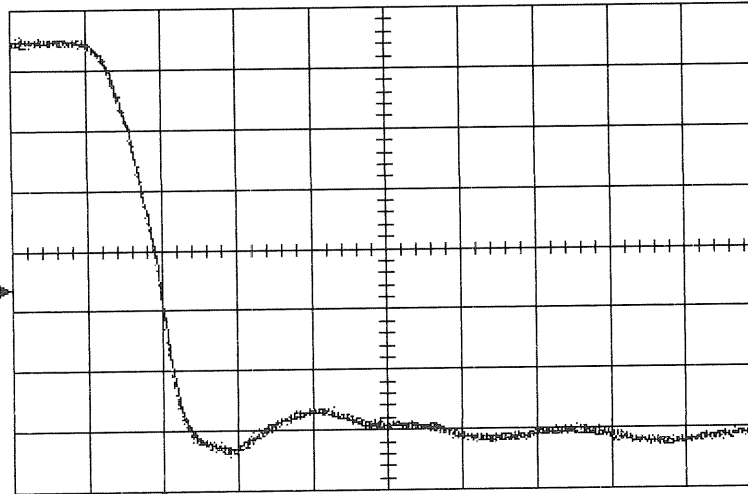
slope 3
Pos Neg
Window

holdoff
OFF Time Evts

19-May-08
17:01:29

RALIPPS
Q1 ADC input
w/active probe

2 ns
0.50 V
12 swps



12 sweeps: average low high sigma
period(3) ---
width(3) ---
rise(3) ---
Fall(3) 1.72 ns 1.69 1.75 0.02
delay(3) -0.24 ns -0.27 -0.21 0.02

1 1 V 500
2 10 mV DC %
3 50 mV DC %
4 1 V 500



3 DC 1.30 V

TRIGGER SETUP

Edge SMART

trigger on
1 2 3 4 Ext
Ext5 Line

coupling 3
DC AC LFREJ
HFREJ HF

slope 3
Pos Neg
Window

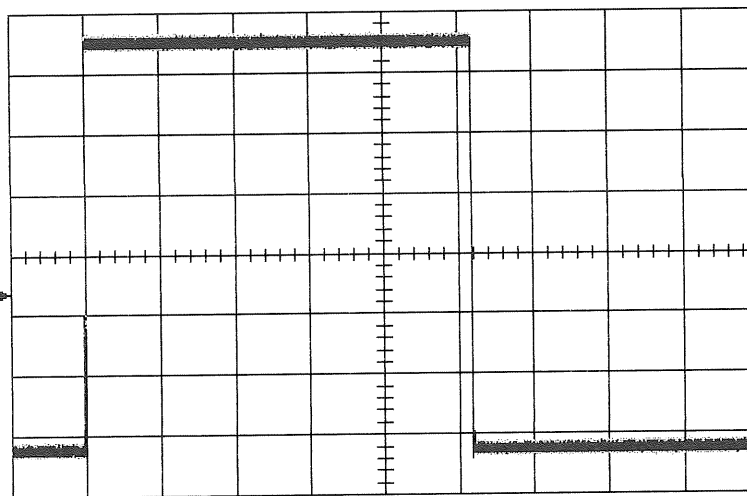
holdoff
OFF Time Evt

NORMAL

19-May-08
16:55:49

*RAL
direct into
scope*

5 ps
0.50 V
11 swps



11 sweeps: average low high sigma

period(3)	---	---	---	---
width(3)	25.9908 μ s	25.9907	25.9910	0.0001
rise(3)	5.72 ns	5.40	6.18	0.22
Fall(3)	1.65 ns	1.62	1.68	0.02
delay(3)	0.19 ns	0.14	0.25	0.03

- 1 1 V 50 Ω
- 2 10 mV DC $\%$
- 3 .5 V 50 Ω
- 4 1 V 50 Ω



3 DC 1.30 V

TRIGGER SETUP

Edge SMART

trigger on
1 2 3 4 Ext
Ext5 Line

coupling 3
DC AC LFREJ
HFREJ HF

slope 3
Pos Neg
Window

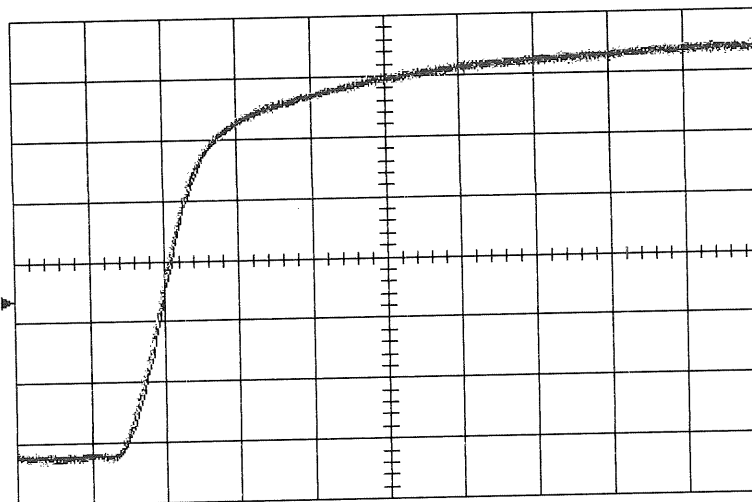
holdoff
OFF Time Evts

8 GS/s
NORMAL

19-May-08
16:55:06

*RAL IPPS
direct into
scope*

2 ns
0.50 V
27 swps



27 sweeps: average low high sigma

period(3)	---	---	---	---
width(3)	---	---	---	---
rise(3)	4.31 ns	3.54	4.83	0.30
Fall(3)	---	---	---	---
delay(3)	0.16 ns	0.12	0.19	0.02

- 1 1 V 50 Ω
- 2 10 mV DC $\%$
- 3 .5 V 50 Ω
- 4 1 V 50 Ω



3 DC 1.30 V

TRIGGER SETUP

Edge SMART

trigger on
1 2 3 4 Ext
Ext5 Line

coupling 3
DC AC LFREJ
HFREJ HF

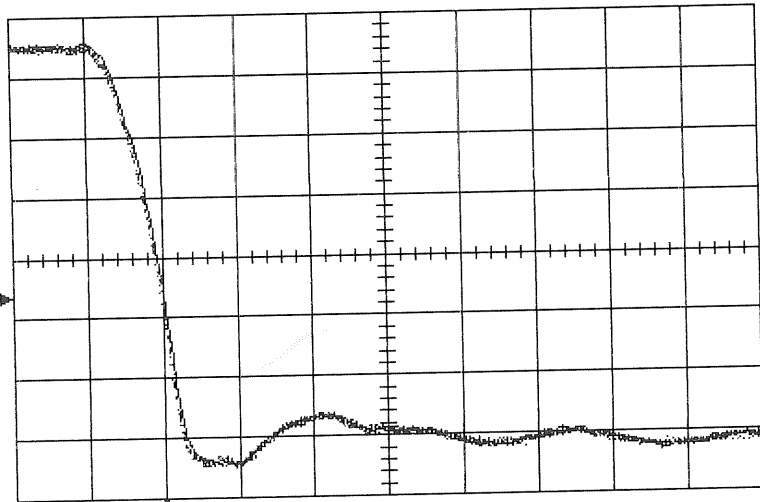
slope 3
Pos Neg
Window

holdoff
OFF Time Evts

8 GS/s
NORMAL

19-May-08
16:53:30
*Ral 1PPS
direct into
Scope*

3
2 ns
0.50 V
13 swps



TRIGGER SETUP

Edge SMART

trigger on
1 2 3 4 Ext
Ext5 Line

coupling **3**
DC AC LFREJ
HFREJ HF

slope **3**
Pos **Neg**
Window

holdoff

OFF Time Evts

13 sweeps: average low high sigma

period(3)	---	---	---	---
width(3)	---	---	---	---
rise(3)	---	---	---	---
Fall(3)	1.60 ns	1.58	1.63	0.01
delay(3)	-0.23 ns	-0.27	-0.21	0.02

- 1 1 V 50Ω
- 2 10 mV DC 50Ω
- 3** .5 V 50Ω
- 4 1 V 50Ω



3 DC 1.30 V

NORMAL ☐

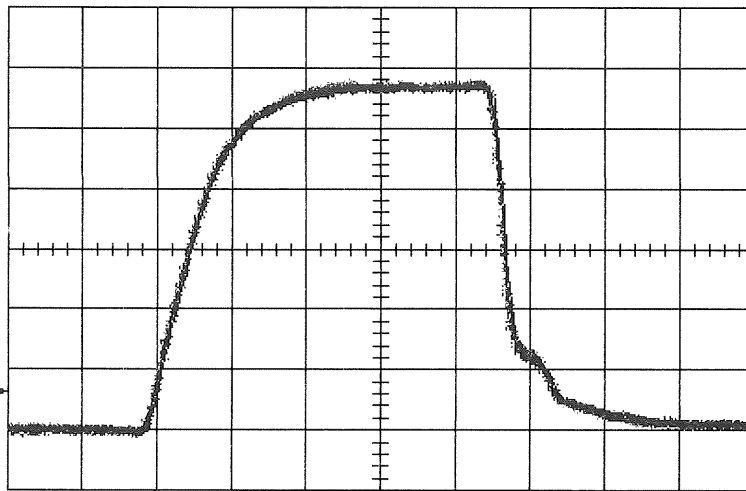
19-May-08
17:55:17

2
2 ns
200mV
40 swps

3
2 ns
200mV
40 swps

ibog 683 and
688
SMA1 1PPS
OUTPUTS direct
into scope
when supplied
by RAL1PPS

1 1 V 500
2 .2 V 500
3 .2 V 500
4 1 V 500



40 sweeps: average low high sigma
period(2) - - -
width(2) 8.50 ns 8.46 8.55 0.02
rise(2) 2.53 ns 2.44 2.63 0.05
fall(2) 1.71 ns 1.64 1.81 0.04
delay(2) 0.82 ns 0.69 0.96 0.06



3 DC 0.132 V

8 GS/s

NORMAL ☐

TRIGGER SETUP

Edge SMART

trigger on
1 2 3 4 Ext
Ext5 Line

coupling 3
DC AC LFREJ
HFREJ HF

slope 3
Pos Neg
Window

holdoff

Time Evts