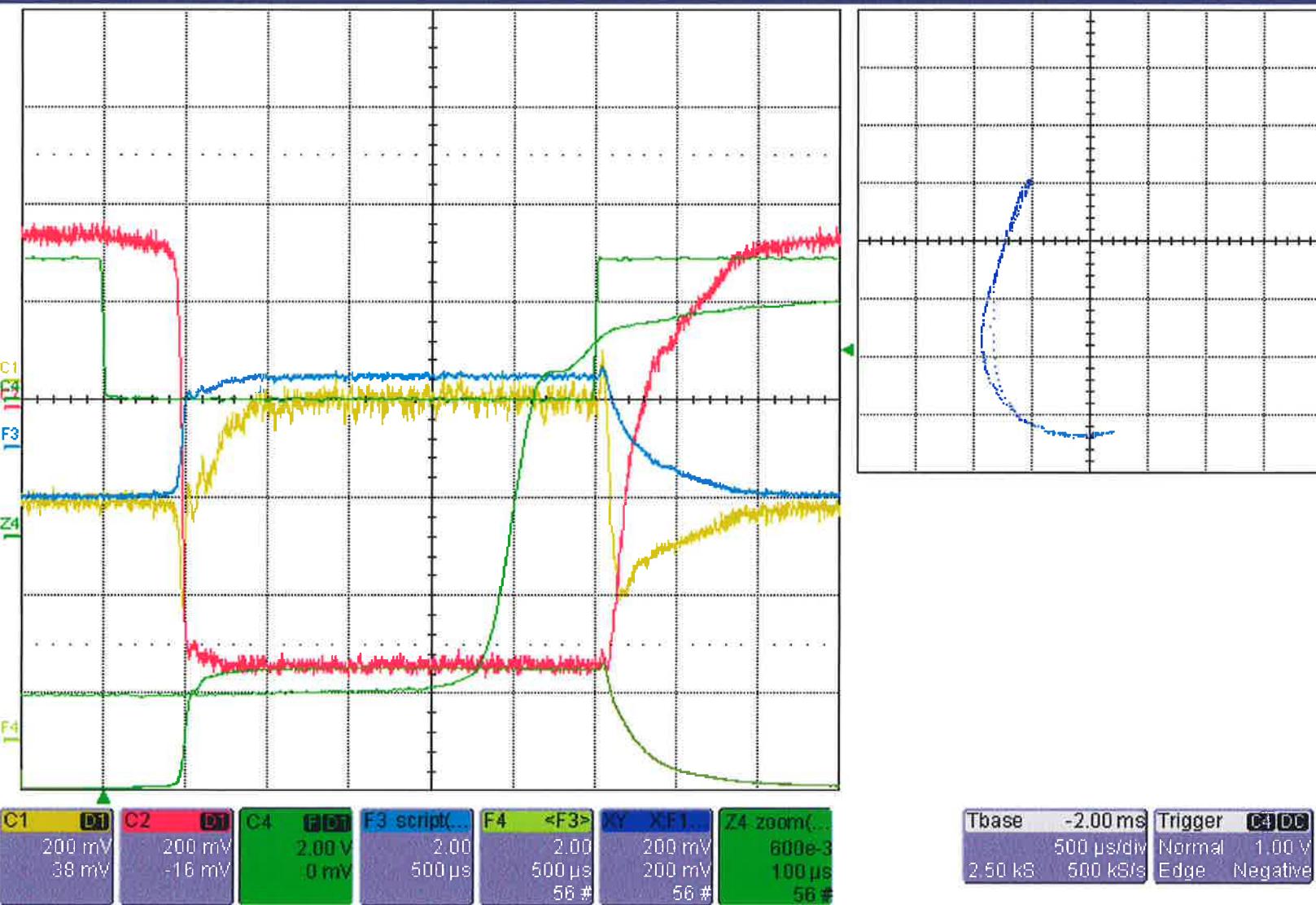


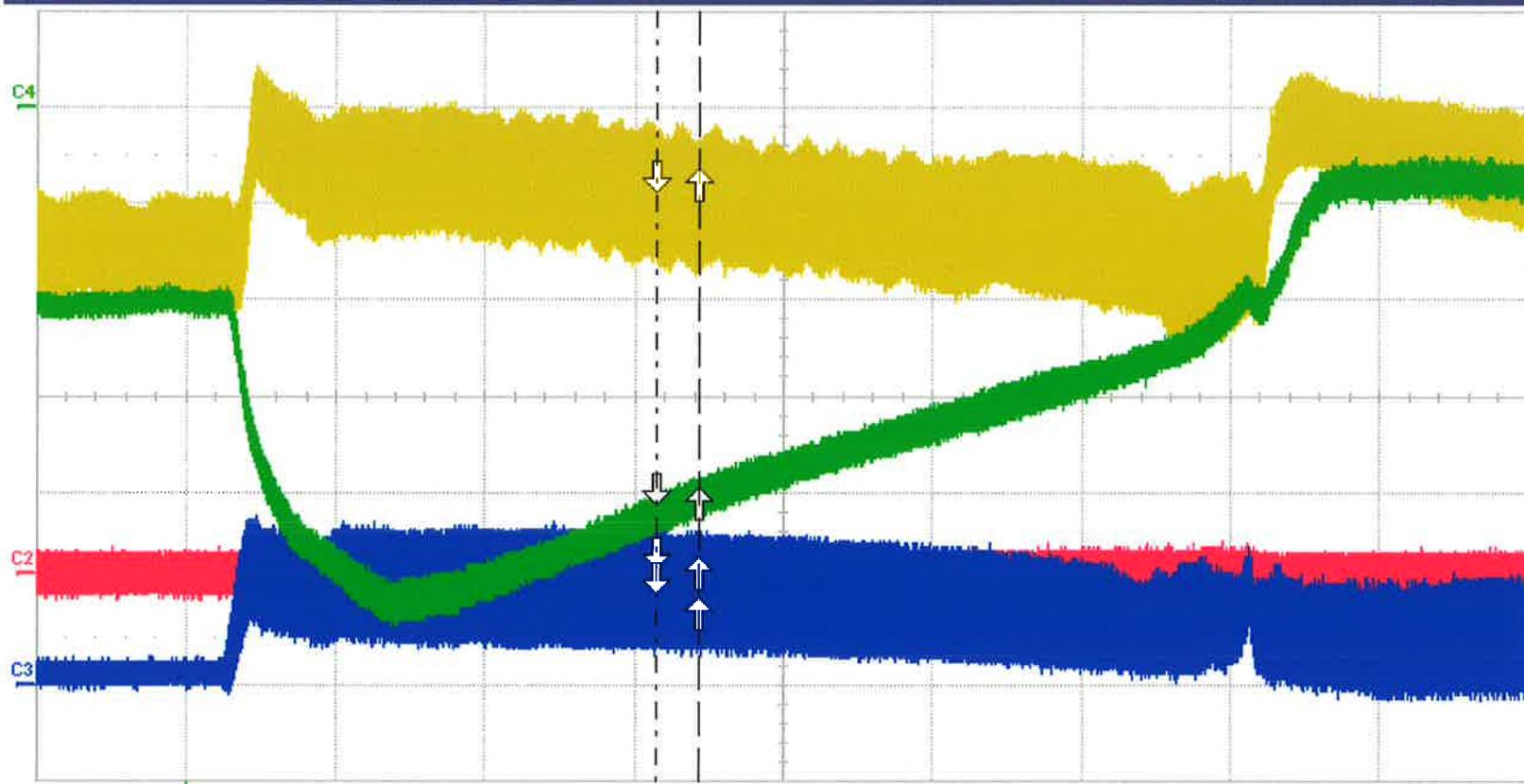
File Vertical Timebase Trigger Display Cursors Measure Math Analysis Utilities Help



LeCroy

11/11/2019 10:42:15 AM

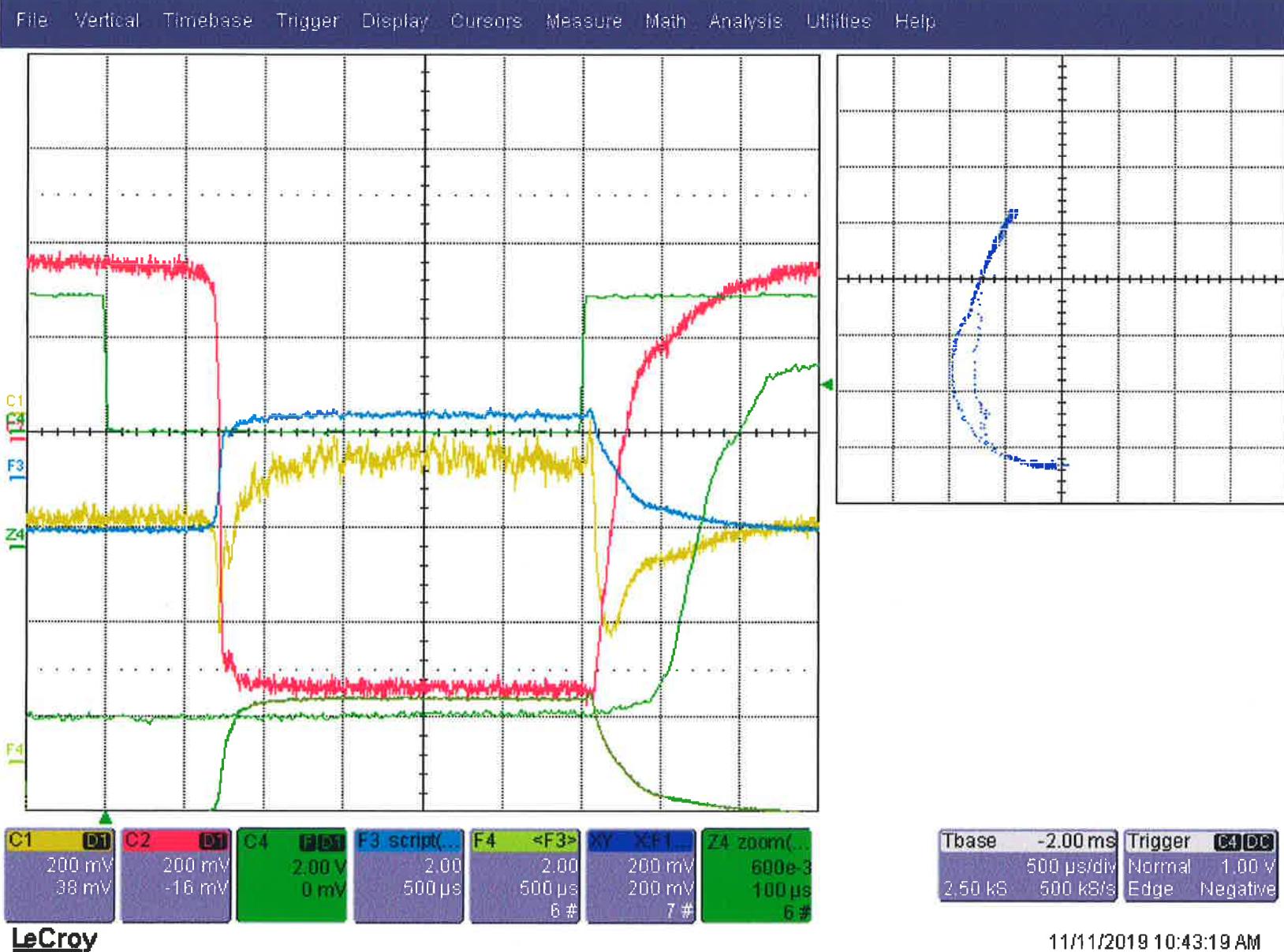
File Vertical Timebase Trigger Display Cursors Measure Math Analysis Utilities Help



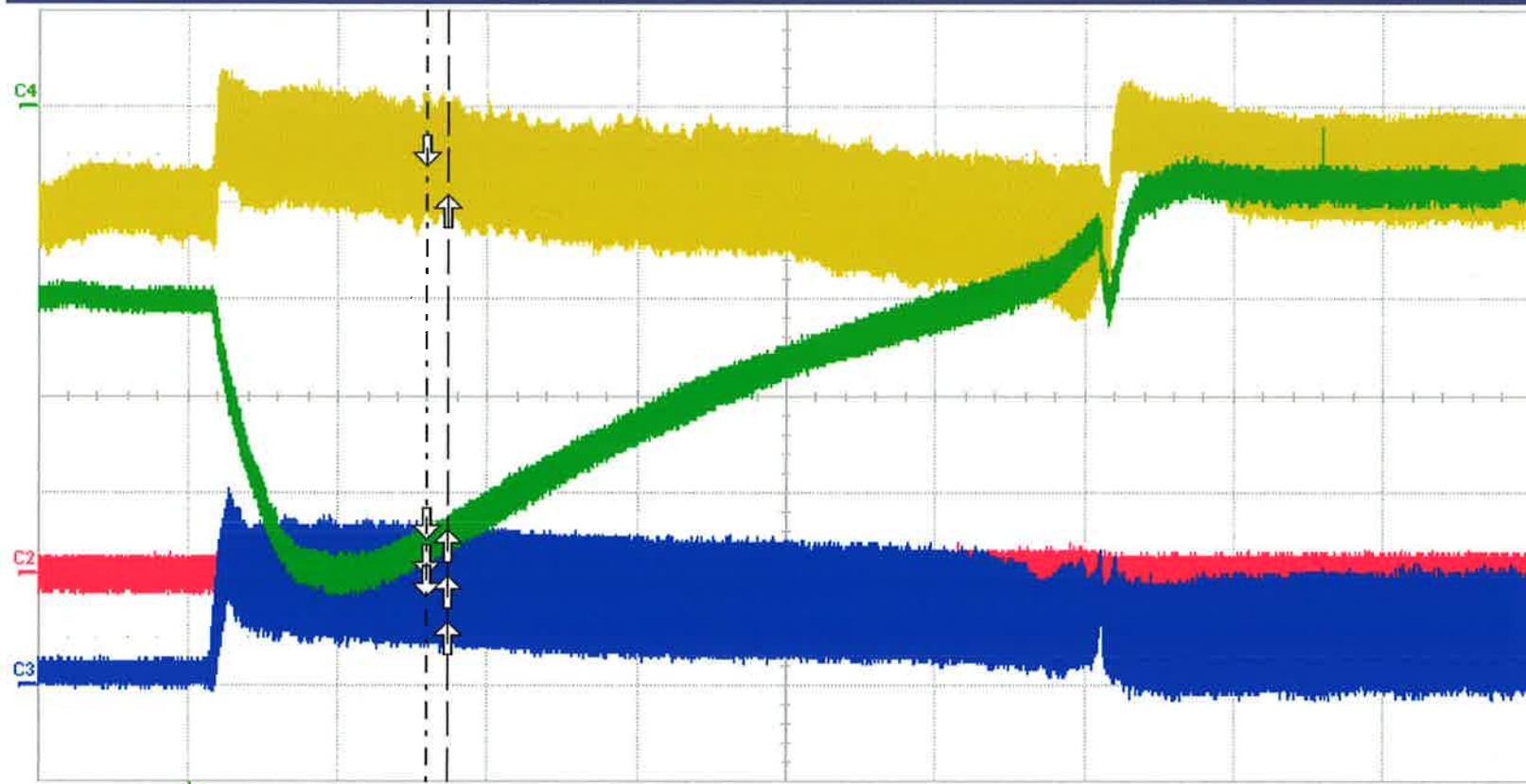
Measure	P1:mean(C1)	P2:pkpk(C2)	P3:pkpk(C3)	P4:mean(C3)	P5:mean(C4)	P6:---	
value	-101.9 mV	563 mV	134 V	46.1 V	-73.3 V		
status	✓	✓	✓	✓	✓		
C1	DCIM	C2	DCIM	C3	DCIM	C4	DCIM
200 mV/div		1.00 V/div		100 V/div		100 V/div	
600.0 mV offset		-1.840 V offset		-300.0 V offset		299.0 V offset	
↓ -170.6 mV		↓ 79 mV		↓ 98.9 V		↓ -410.4 V	
↑ -131.7 mV		↑ 153 mV		↑ 90.6 V		↑ -394.8 V	
Δy 38.8 mV		Δy 74 mV		Δy -8.3 V		Δy 15.8 V	
						Timebase -400 μs	Trigger Ext/10 DC
						1.00 MS	100 μs/div
						1.0 GS/s	Normal 200 mV
						Edge	Positive
						X1= 314.260 μs	ΔX= 29.060 μs
						X2= 343.320 μs	1/ΔX= 34.412 kHz

LeCroy

11/11/2019 10:43:06 AM



File Vertical Timebase Trigger Display Cursors Measure Math Analysis Utilities Help

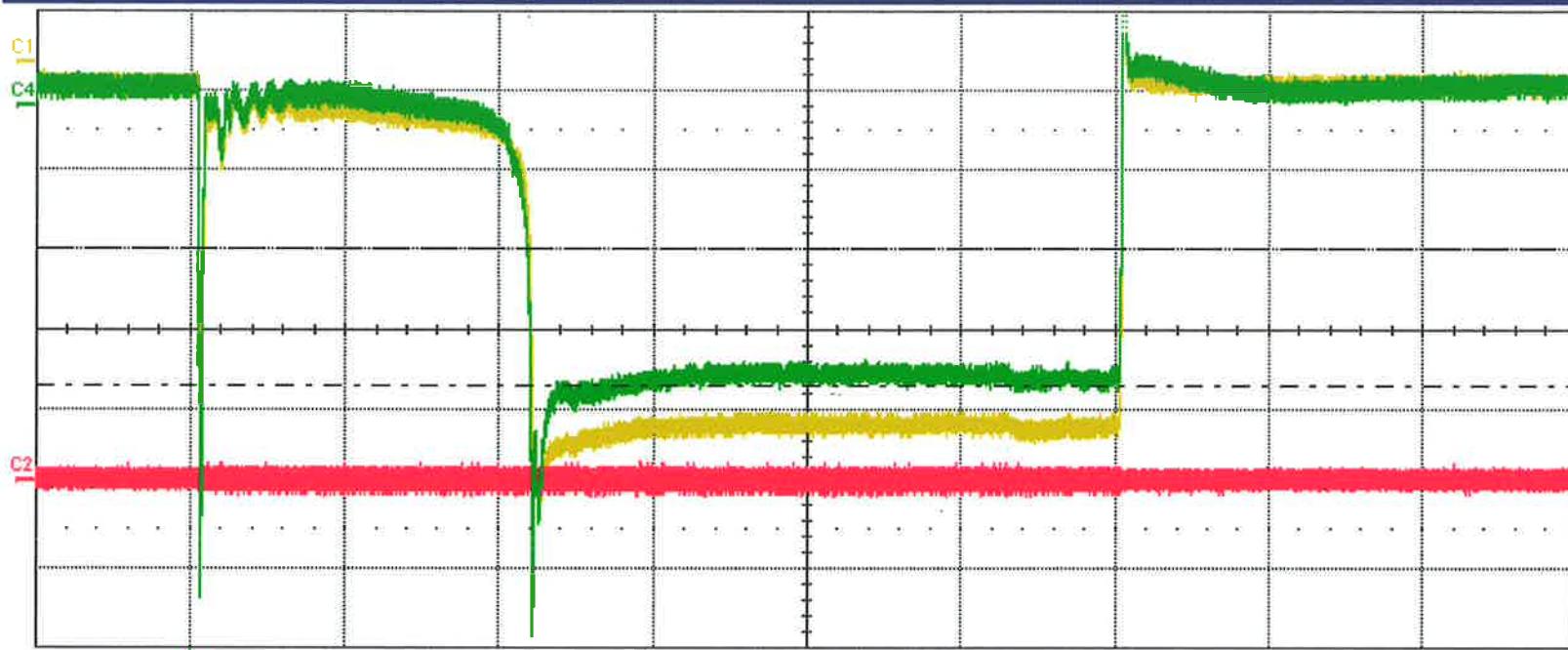


Measure	P1:mean(C1)	P2:pkpk(C2)	P3:pkpk(C3)	P4:mean(C3)	P5:mean(C4)	P6:---
value	-130.9 mV	531 mV	144 V	52.6 V	-81.3 V	
status	✓	✓	✓	✓	✓	
C1	DCIM	C2	DCIM	C3	DCIM	C4
200 mV/div		1.00 V/div		100 V/div		100 V/div
600.0 mV offset		-1.840 V offset		-300.0 V offset		299.0 V offset
↓ -121.6 mV		↓ 6 mV		↑ 93.8 V		↑ -444.8 V
↑ -189.1 mV		↑ -40 mV		↑ 64.7 V		↑ -438.7 V
Δy -67.6 mV		Δy -45 mV		Δy -29.1 V		Δy 5.9 V
Timebase	-796 μs	Trigger	Ext/10 DC			
	200 μs/div	Normal	200 mV			
1.00 MS	500 MS/s	Edge	Positive			
X1= 314.260 μs	ΔX= 29.060 μs					
X2= 343.320 μs	1/ΔX= 34.412 kHz					

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11/11/2019 10:44:26 AM

File Vertical Timebase Trigger Display Cursors Measure Math Analysis Utilities Help



Measure	P1:mean(Z1)	P2:mean(Z4)	P3:mean(C1)	P4:mean(C4)	P5:phase(C1,C4)	P6:---
value	-45.38 mV	-33.56 mV	-45.53 mV	-33.86 mV	---	
mean	-17.1371 mV	-8.8416 mV	-17.3116 mV	-9.0243 mV	---	
min	-46.94 mV	-35.17 mV	-46.95 mV	-35.14 mV	---	
max	-4.85 mV	2.07 mV	-5.06 mV	1.90 mV	---	
sdev	18.3799 mV	16.1822 mV	18.3150 mV	16.1408 mV	---	
num	7	7	7	7	0	
status	✓	✓	✓	✓	✓	

C1	DCHM	C2	DCHM	C4	DCHM
10.0 mV/div		1.00 V/div		10.0 mV/div	
33.50 mV offset		-1.890 V offset		29.00 mV offset	
---- -40.5 mV		---- 1.19 V		---- -35.0 mV	
---- -23.5 mV		---- 2.89 V		---- -18.0 mV	
Δy 17.0 mV	Δy	Δy	Δy	Δy	Δy

Timebase	-2.00 ms	Trigger	Ext/10 DC
500 μs/div		Normal	200 mV
1.00 MS	200 MS/s	Edge	Negative

LeCroy

11/11/2019 10:45:27 AM

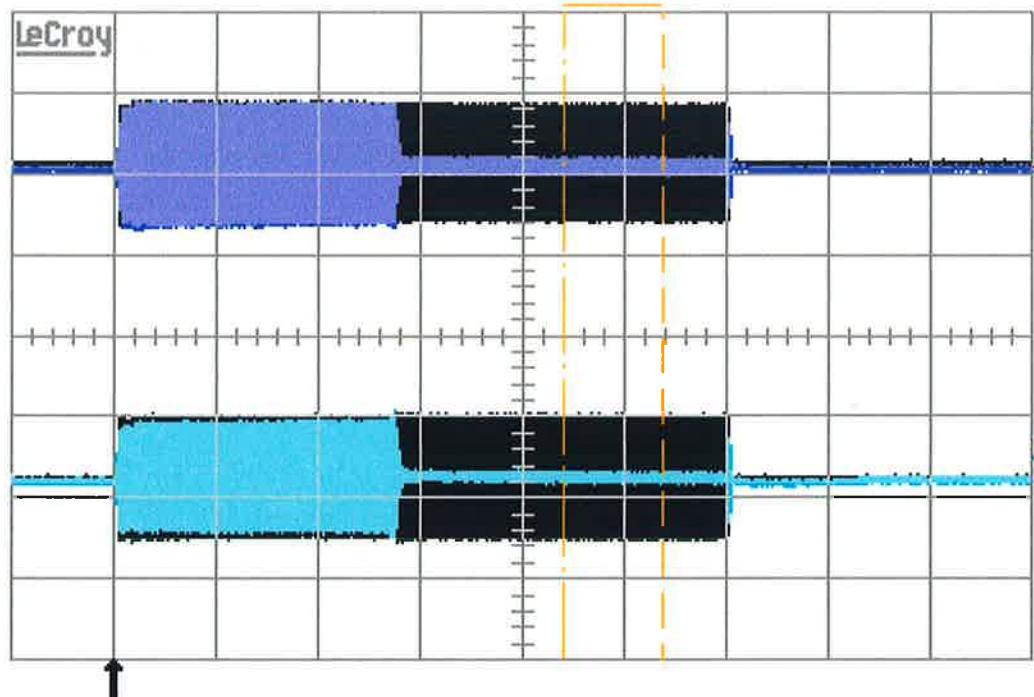
11-Nov-19  
10:45:45

1 .5 ms  
0.50 V

2 .5 ms  
200mV

3 .5 ms  
0.50 V

4 .5 ms  
200mV



	10 sweeps:	average	low	high	sigma
rms(1)		254.4 mV	247.5	259.4	5.4
rms(2)		68.6 mV	14.4	104.9	46.3
rms(3)		261.1 mV	257.6	265.3	3.2
rms(4)		60.1 mV	8.9	94.0	43.3
phase(1,3)		72.9 °	-132.5	220.3	38.4

.5 ms

- 1 .5 V AC
- 2 .2 V AC
- 3 .5 V AC
- 4 .2 V AC

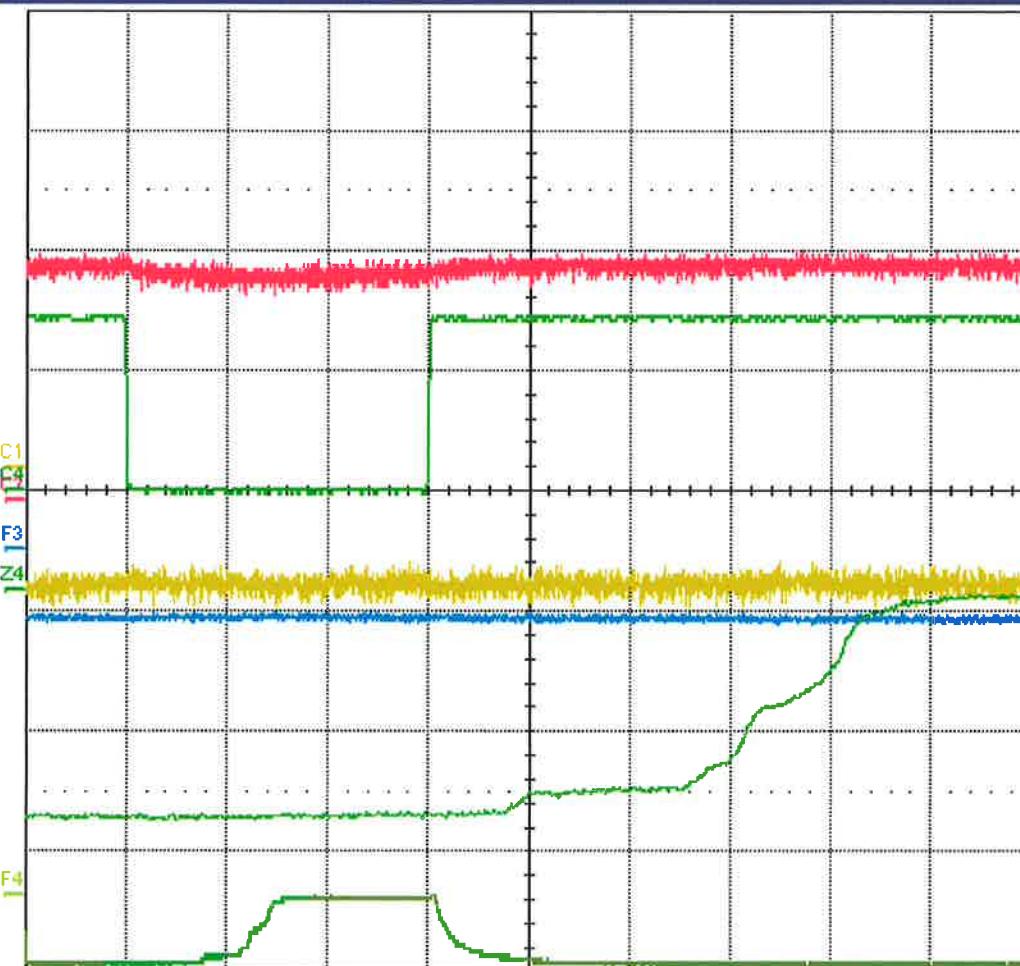


Ext10 DC 0.60 V 1MΩ

20 MS/s

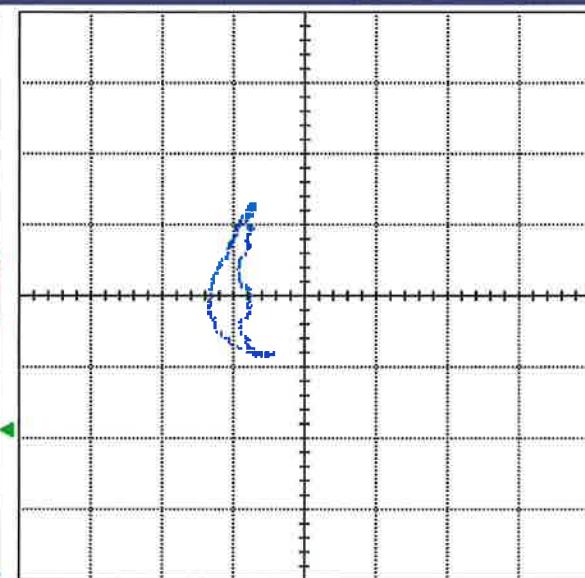
NORMAL

File Vertical Timebase Trigger Display Cursors Measure Math Analysis Utilities Help



C1 D1 200 mV 2.00 2.00 200 mV 600e-3  
20 mV -16 mV 0 ms 1.0 ms 20 # 200 mV 200 μs 20 #  
C2 D1 200 mV 2.00 2.00 200 mV 600e-3  
-16 mV 0 ms 1.0 ms 20 # 200 mV 200 μs 20 #  
C4 F3 2.00 2.00 200 mV 600e-3  
0 mV 1.0 ms 20 # 200 mV 200 μs 20 #  
F3 script... 2.00 2.00 200 mV 600e-3  
1.0 ms 20 # 200 mV 200 μs 20 #  
F4 <F3> 2.00 2.00 200 mV 600e-3  
1.0 ms 20 # 200 mV 200 μs 20 #  
Z4 zoom( 2.00 2.00 200 mV 600e-3  
200 μs 20 # 200 mV 200 μs 20 #

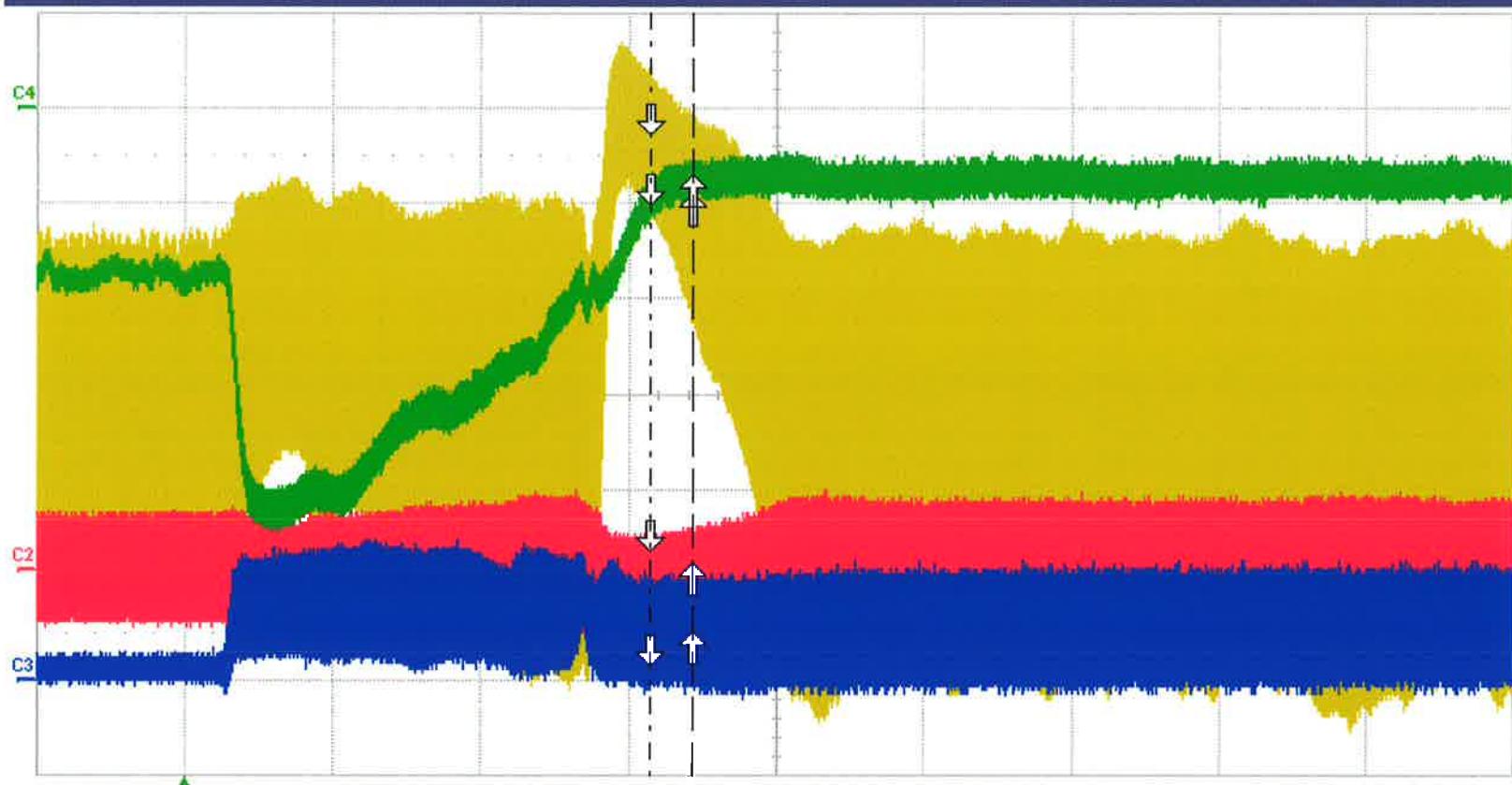
LeCroy



Tbase -4.00 ms 1.00 ms/div  
5.00 kS 500 kS/s Trigger C4 DC  
Normal 1.00 V  
Edge Negative

11/11/2019 10:45:37 AM

File Vertical Timebase Trigger Display Cursors Measure Math Analysis Utilities Help



**Measure**

value

P1:mean(C1)

-739.9 mV

status

P2:pkpk(C2)

1.53 V

P3:pkpk(C3)

138 V

P4:mean(C3)

53.2 V

P5:mean(C4)

-74.1 V

P6:---

C1

DCIM

DCIM

DCIM

DCIM

DCIM

200 mV/div

600.0 mV ofst

-51.3 mV

-165.2 mV

-133.9 mV

1.00 V/div

-1.840 V ofst

208 mV

60 mV

Δy

100 V/div

-300.0 V ofst

18.9 V

50.0 V

Δy

100 V/div

299.0 V offset

-99.5 V

-71.2 V

Δy

Timebase

1.00 MS

-400 μs

100 μs/div

Trigger

Ext 10 DC

Normal

Edge

200 mV

Positive

X1= 314.260 μs ΔX= 29.060 μs

X2= 343.320 μs 1/ΔX= 34.412 kHz

LeCroy

11/11/2019 10:48:02 AM

11-Nov-19  
10:48:47

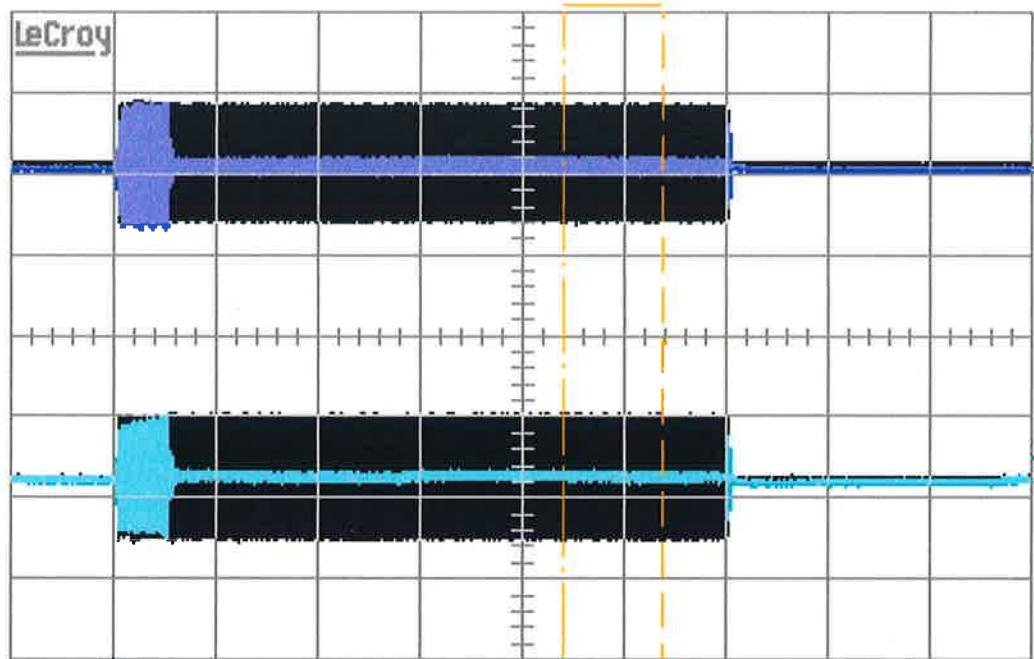
1 .5 ms  
0.50 V

2 .5 ms  
200mV

3 .5 ms  
0.50 V

4 .5 ms  
200mV

1 .5 V AC  
2 .2 V AC  
3 .5 V AC  
4 .2 V AC



5 sweeps: average low high sigma

rms(1) 248.3mV 246.9 249.1 0.8

rms(2) 15.1mV 14.8 15.7 0.3

rms(3) 265.1mV 263.8 265.7 0.7

rms(4) 10.6mV 10.0 11.2 0.5

phase(1,3) 64.7 ° -131.5 220.2 43.8

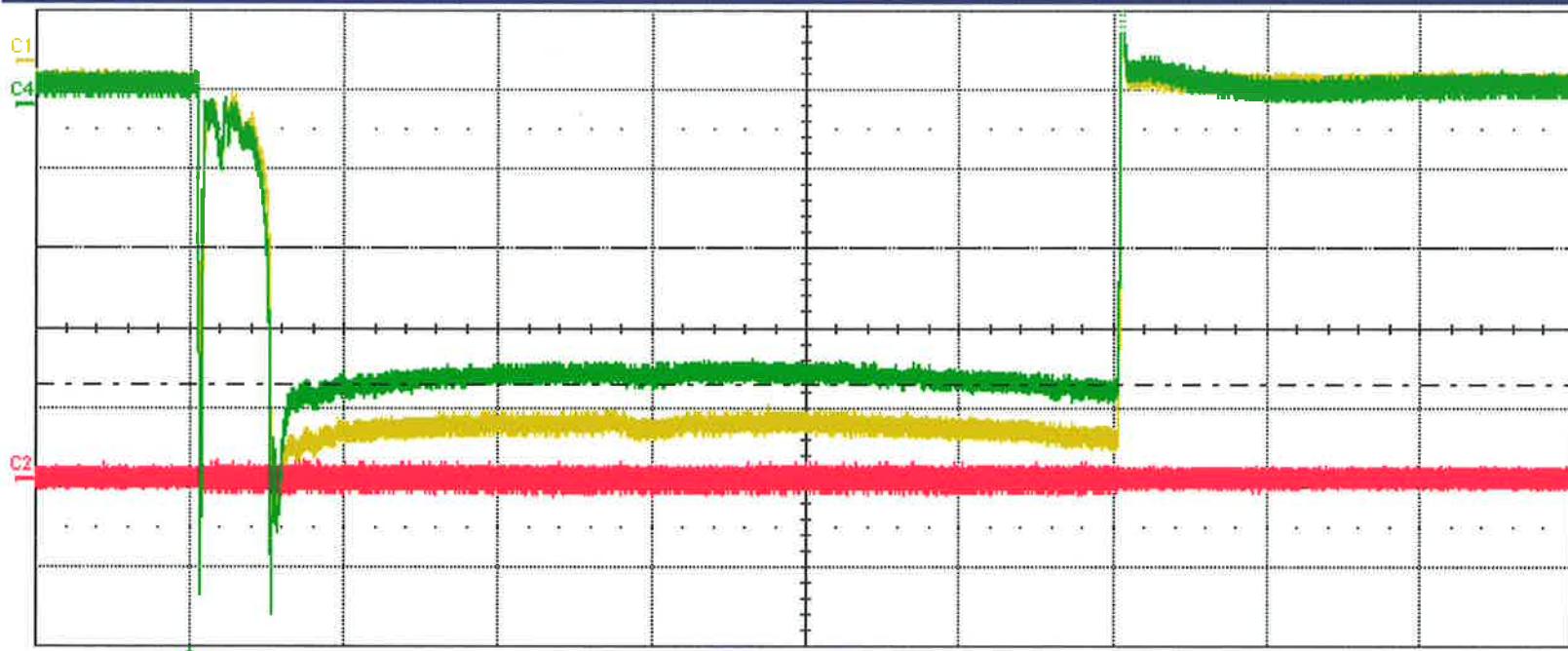


Ext10 DC 0.60 V 1MΩ

20 MS/s

NORMAL

File Vertical Timebase Trigger Display Cursors Measure Math Analysis Utilities Help



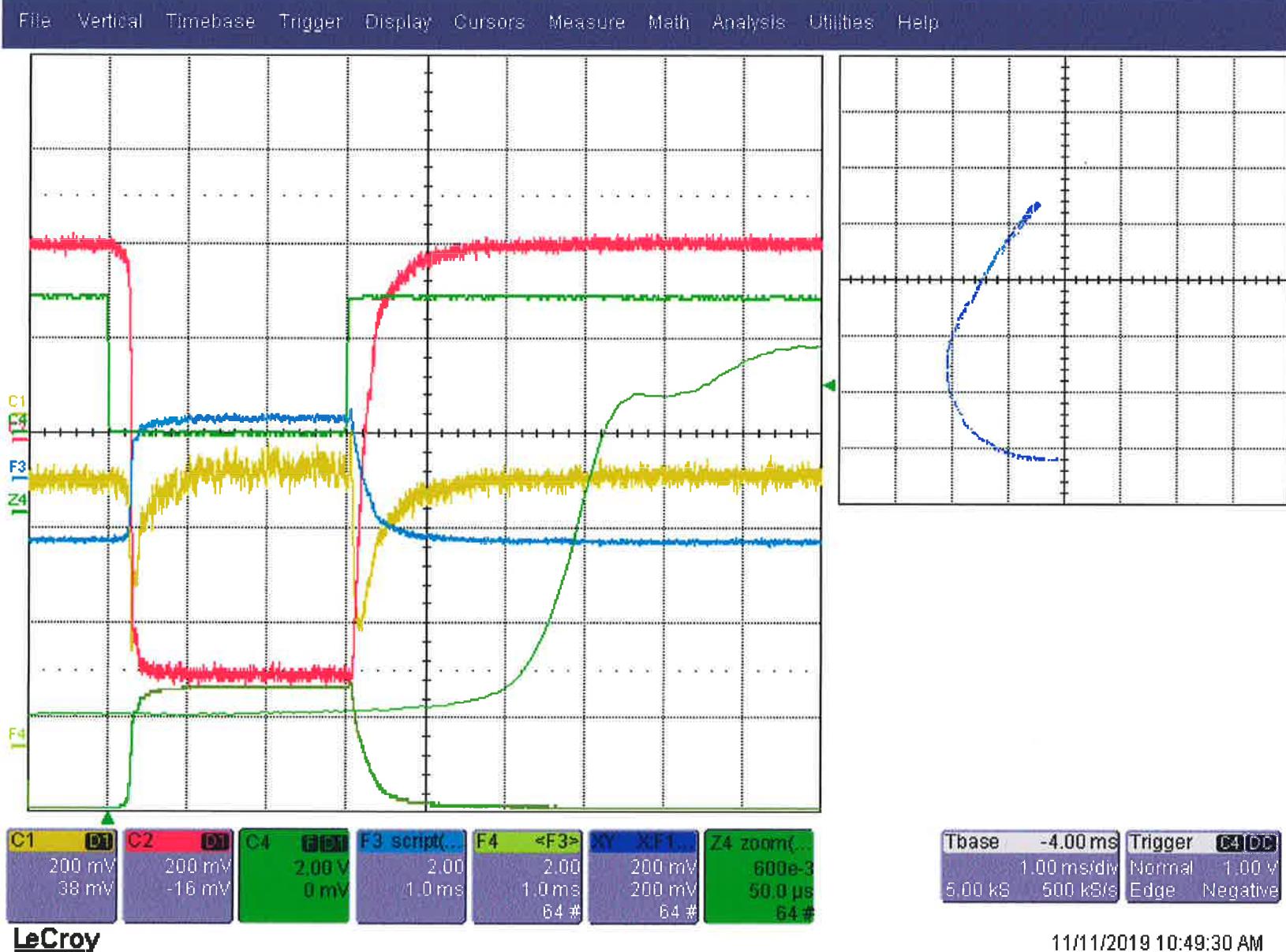
Measure	P1:mean(Z1)	P2:mean(Z4)	P3:mean(C1)	P4:mean(C4)	P5:phase(C1,C4)	P6:---
value	-45.34 mV	-33.66 mV	-45.51 mV	-33.73 mV	---	
mean	-45.9229 mV	-34.2679 mV	-46.0467 mV	-34.3483 mV	---	
min	-47.54 mV	-35.76 mV	-47.23 mV	-35.56 mV	---	
max	-45.26 mV	-33.20 mV	-45.10 mV	-33.52 mV	---	
sdev	750.4 $\mu$ V	768.8 $\mu$ V	687.5 $\mu$ V	674.6 $\mu$ V	---	
num	9	9	9	9	0	
status	✓	✓	✓	✓	✓	

C1	DCLM	C2	DCLM	C4	DCLM
10.0 mV/div		1.00 V/div		10.0 mV/div	
33.50 mV offset		-1.890 V offset		28.00 mV offset	
---- -40.5 mV		---- 1.19 V		---- -35.0 mV	
----- -23.5 mV		----- 2.89 V		----- -18.0 mV	
Δy 17.0 mV		Δy 1.70 V		Δy 17.0 mV	

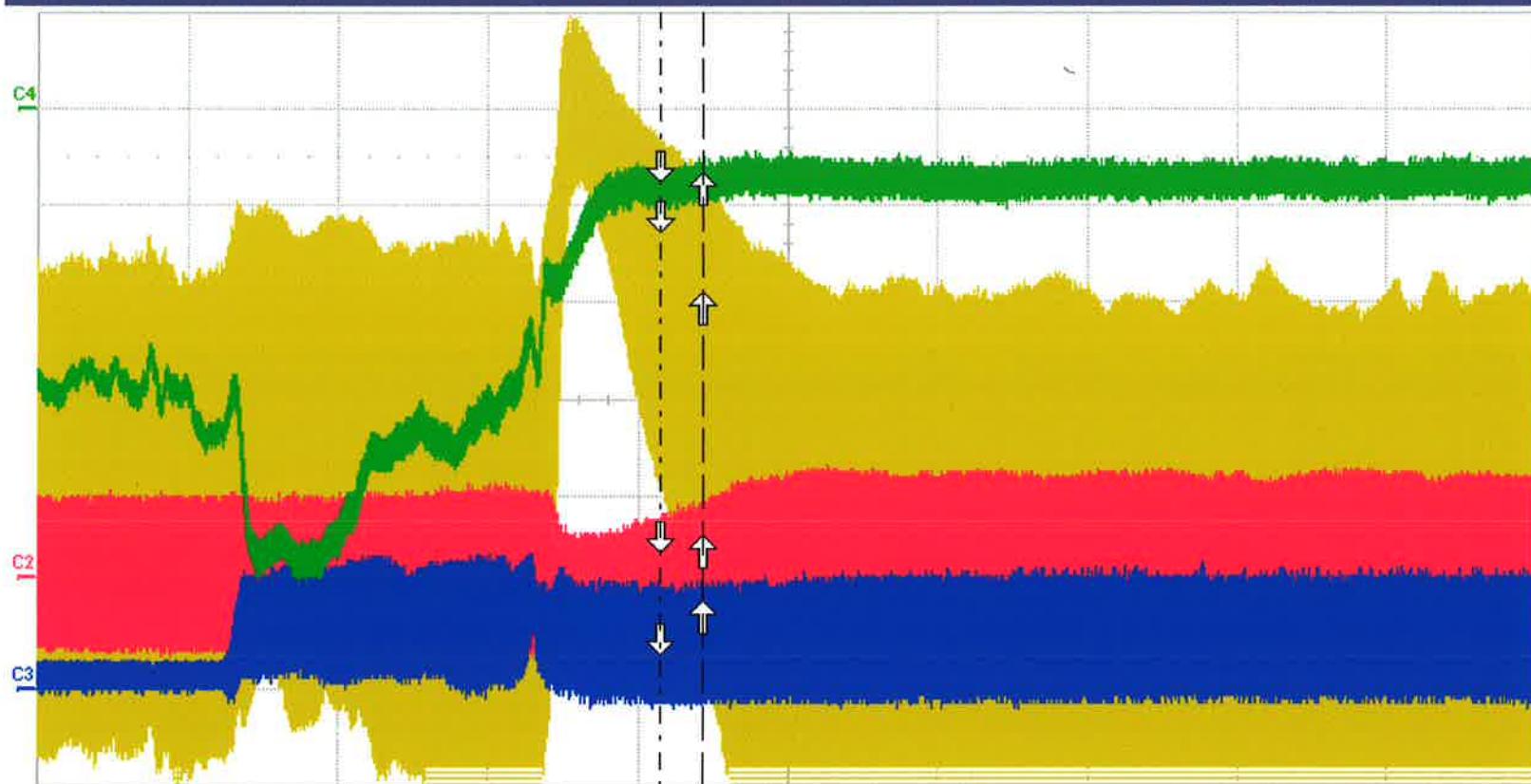
Timebase	-2.00 ms	Trigger	Ext/I/O DC
	500 $\mu$ s/div		200 mV
1.00 MS	200 MS/s	Normal Edge	Negative

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11/11/2019 10:48:36 AM



File Vertical Timebase Trigger Display Cursors Measure Math Analysis Utilities Help



**Measure**

value

P1:mean(C1)

< -1.0104 V

status

P2:pkpk(C2)

2.13 V

✓

P3:pkpk(C3)

147 V

✓

P4:mean(C3)

51.8 V

✓

P5:mean(C4)

-71.0 V

✓

P6: ---

C1 DCIM

200 mV/div

600.0 mV offset

-937.3 mV

-888.1 mV

49.2 mV

C2 DCIM

1.00 V/div

-1.840 V offset

-395 mV

166 mV

561 mV

C3 DCIM

100 V/div

-300.0 V offset

76.6 V

45.3 V

-31.2 V

C4 DCIM

100 V/div

289.0 V offset

-66.1 V

-61.5 V

4.6 V

Timebase -400 μs

1.00 MS

100 μs/div

Normal Edge

200 mV Positive

Trigger Ext/I/O DC

1.0 GS/s

X1= 314.260 μs

X2= 343.320 μs

1/ΔX= 34.412 kHz

LeCroy

11/11/2019 10:51:46 AM

11-Nov-19  
10:52:41

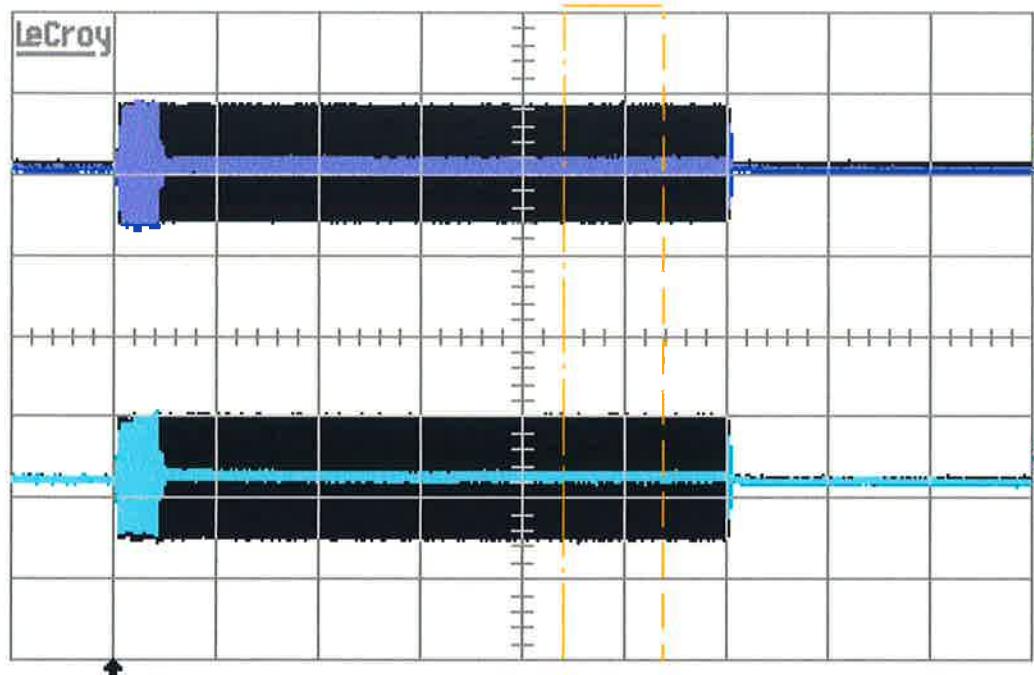
1 .5 ms  
0.50 V

2 .5 ms  
200mV

3 .5 ms  
0.50 V

4 .5 ms  
200mV

1 .5 V AC  
2 .2 V AC  
3 .5 V AC  
4 .2 V AC



	7 sweeps:	average	low	high	sigma
rms(1)		248.3mV	247.4	249.3	0.7
rms(2)		15.4mV	14.3	16.1	0.6
rms(3)		264.9mV	264.1	265.7	0.6
rms(4)		11.3mV	8.9	12.8	1.4
phase(1,3)		63.3 °	-130.7	220.6	40.0

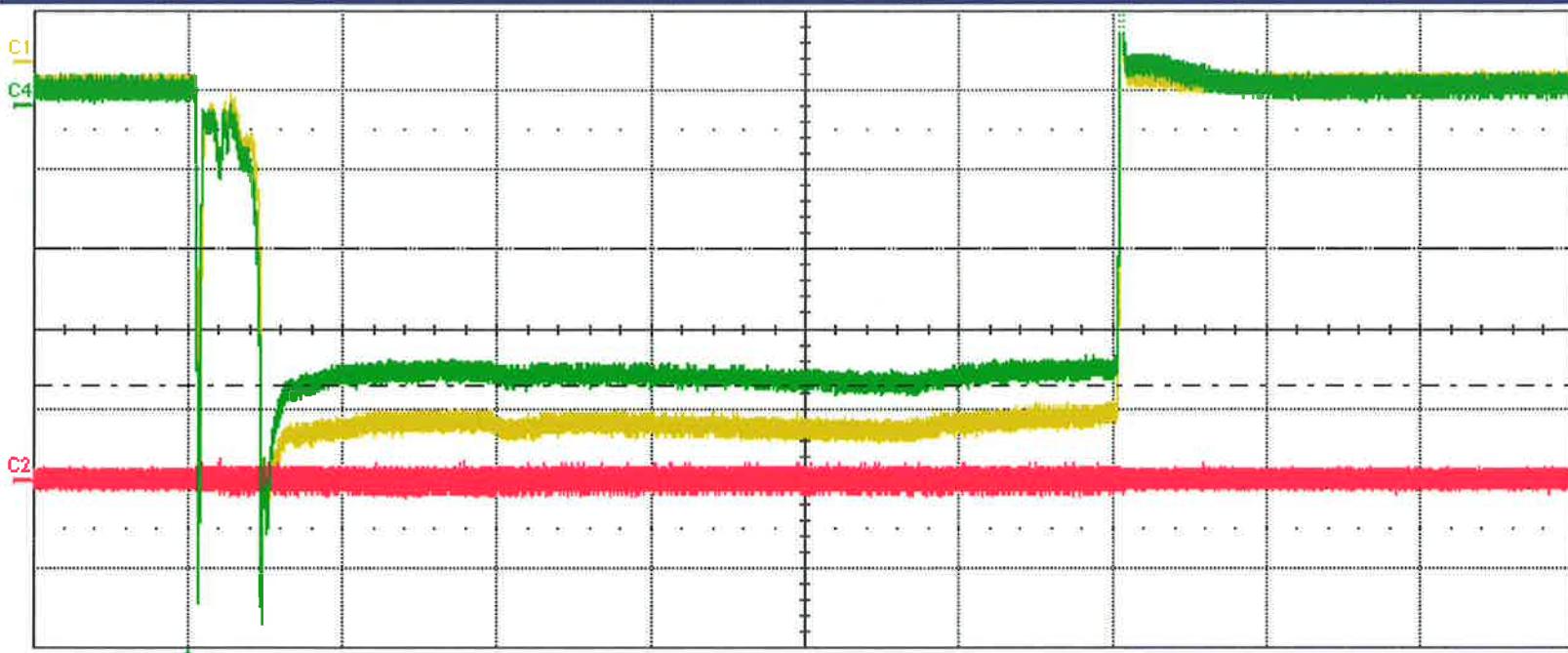


Ext10 DC 0.60 V 1MΩ

20 MS/s

NORMAL

File Vertical Timebase Trigger Display Cursors Measure Math Analysis Utilities Help



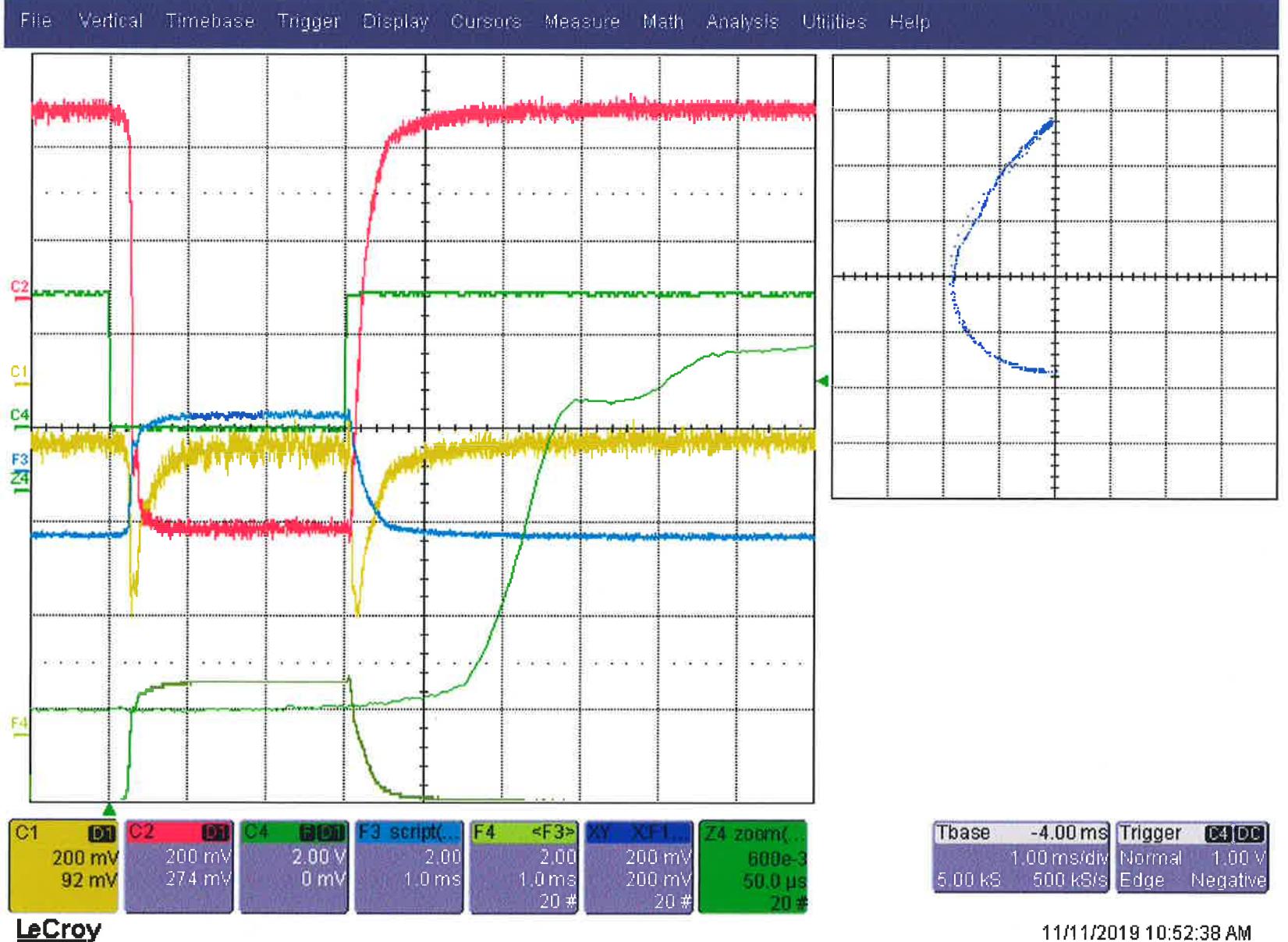
Measure	P1:mean(Z1)	P2:mean(Z4)	P3:mean(C1)	P4:mean(C4)	P5:phase(C1,C4)	P6:---
value	-46.06 mV	-34.44 mV	-45.69 mV	-34.10 mV	---	
mean	-45.6032 mV	-34.1620 mV	-45.6298 mV	-34.1214 mV	---	
min	-47.07 mV	-35.56 mV	-46.99 mV	-35.40 mV	---	
max	-44.72 mV	-33.24 mV	-44.52 mV	-32.87 mV	---	
sdev	708.7 $\mu$ V	687.0 $\mu$ V	641.6 $\mu$ V	680.8 $\mu$ V	---	
num	10	10	10	10	0	
status	✓	✓	✓	✓	✓	

C1	DCIM	C2	DCIM	C4	DCIM
10.0 mV/div		1.00 V/div		10.0 mV/div	
33.50 mV/offset		-1.890 V/offset		28.00 mV/offset	
----		1.19 V		-35.0 mV	
-----		-----		-----	
-40.5 mV		2.89 V		-18.0 mV	
-----		-----		-----	
-23.5 mV		Δy		17.0 mV	
-----		Δy		Δy	

Timebase	-2.00 ms	Trigger	Ext/10 DC
	500 $\mu$ s/div		200 mV
1.00 MS	200 MS/s	Normal	Edge
-----	-----	-----	Negative

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11/11/2019 10:52:30 AM



11-Nov-19  
10:54:10

1 .5 ms  
0.50 V

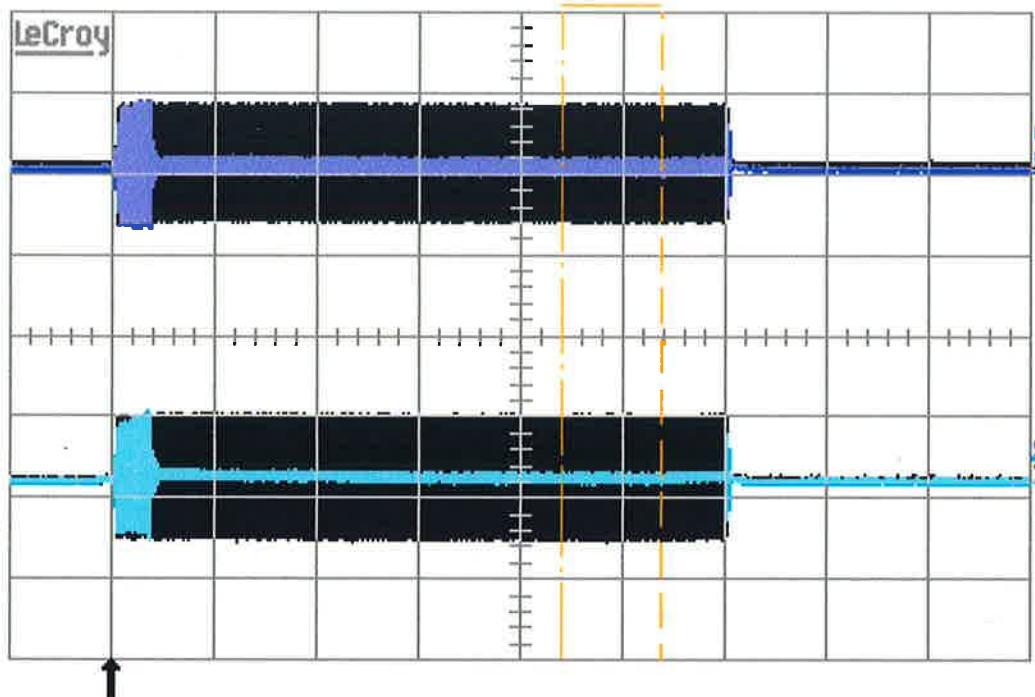
2 .5 ms  
200mV

3 .5 ms  
0.50 V

4 .5 ms  
200mV

.5 ms

1 .5 V AC  
2 .2 V AC  
3 .5 V AC  
4 .2 V AC



5 sweeps: average low high sigma

rms(1) 248.4mV 247.2 250.1 1.3

rms(2) 15.4mV 14.7 16.5 0.7

rms(3) 265.0mV 264.0 266.5 1.1

rms(4) 10.8mV 9.0 12.9 1.7

phase(1,3) 67.6 ° 30.1 220.0 38.3

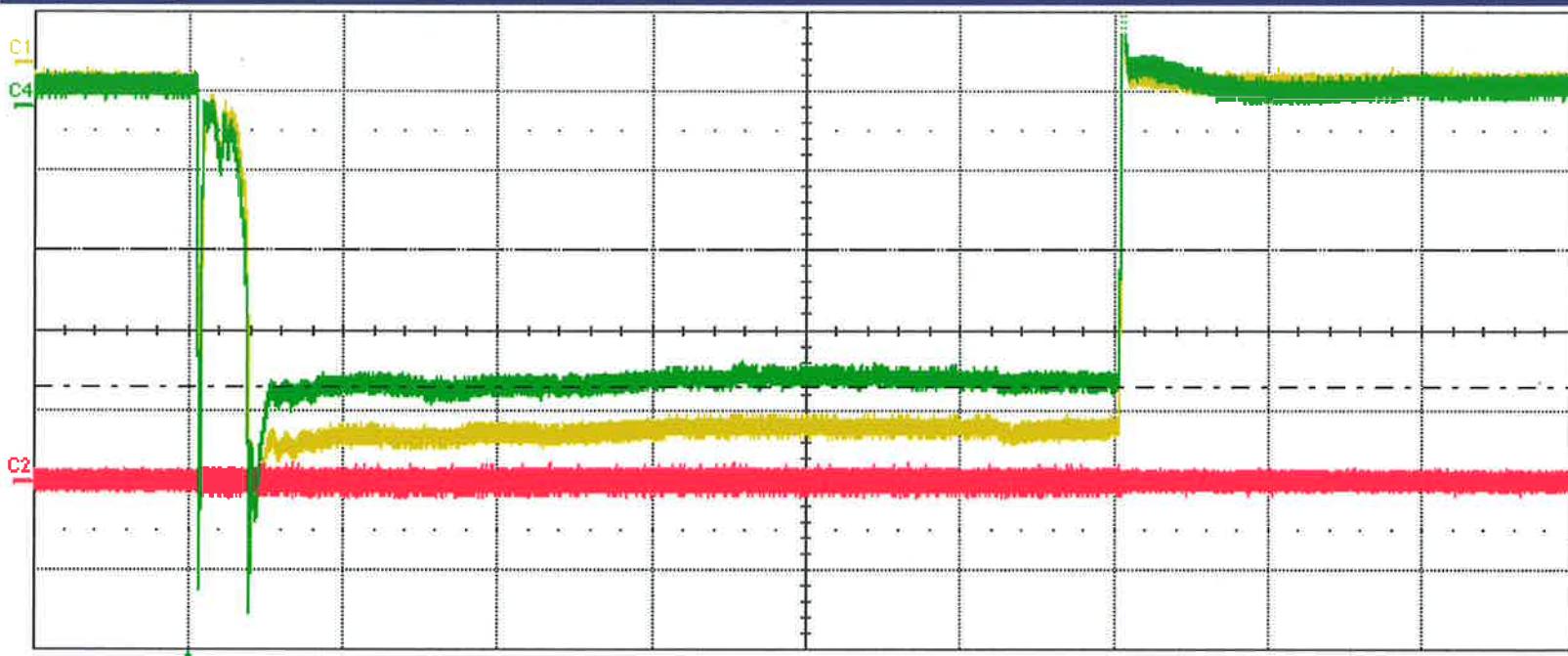


Ext10 DC 0.60 V 1MΩ

20 MS/s

NORMAL

File Vertical Timebase Trigger Display Cursors Measure Math Analysis Utilities Help



Measure	P1:mean(Z1)	P2:mean(Z4)	P3:mean(C1)	P4:mean(C4)	P5:phase(C1,C4)	P6:---
value	-45.45 mV	-33.91 mV	-45.54 mV	-34.01 mV	---	
mean	-45.7497 mV	-34.2014 mV	-45.8141 mV	-34.2258 mV	---	
min	-48.70 mV	-35.98 mV	-48.35 mV	-35.68 mV	---	
max	-44.47 mV	-32.88 mV	-44.52 mV	-32.87 mV	---	
sdev	773.3 $\mu$ V	679.9 $\mu$ V	744.8 $\mu$ V	649.9 $\mu$ V	---	
num	96	96	96	96	0	
status	✓	✓	✓	✓	✓	

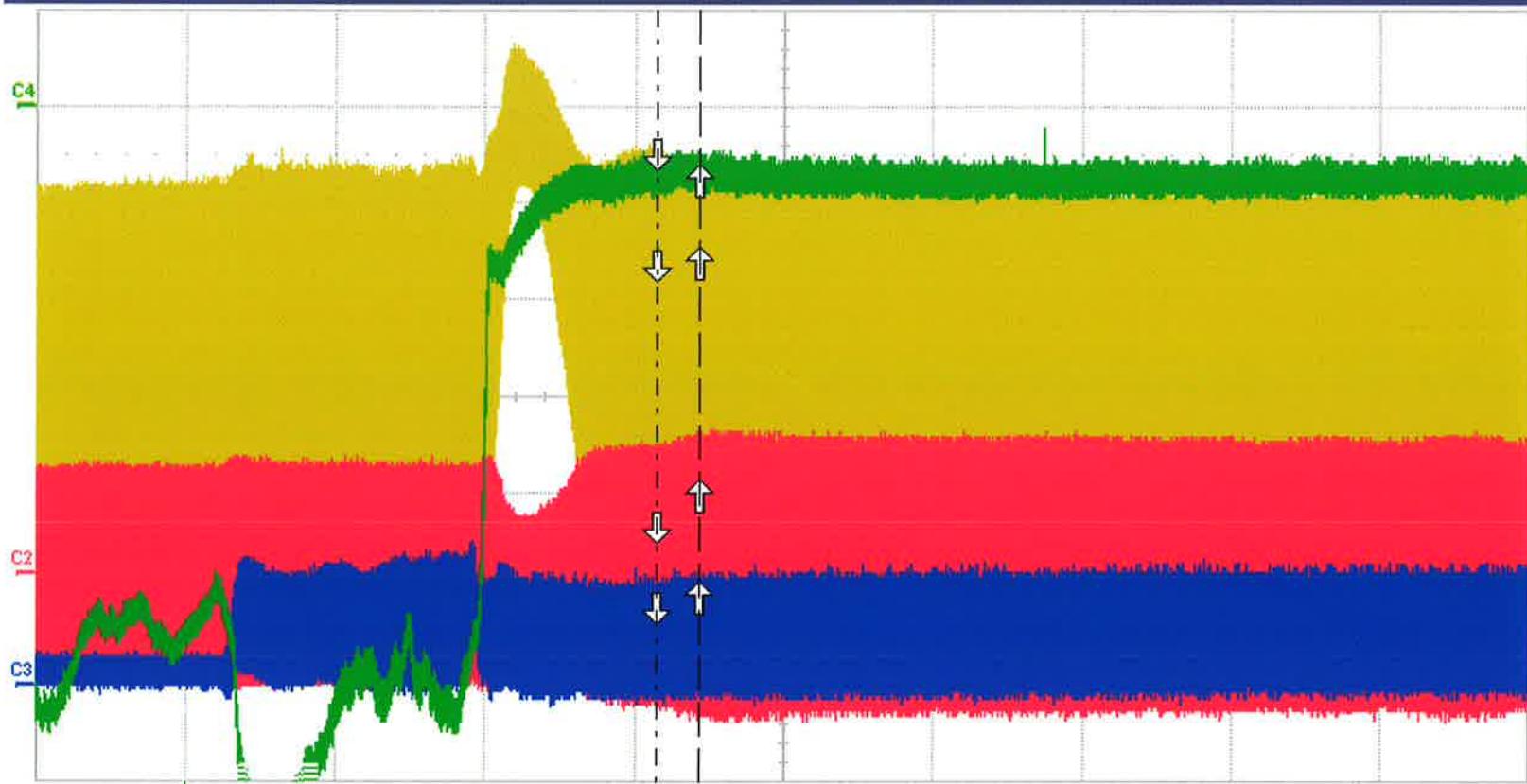
C1	DCIM	C2	DBIM	C4	DCIM
10.0 mV/div		1.00 V/div		10.0 mV/div	
33.50 mV offset		-1.890 V offset		28.00 mV offset	
-----	-40.5 mV	-----	1.19 V	-----	-35.0 mV
-----	-23.5 mV	-----	2.89 V	-----	-18.0 mV
$\Delta Y$	17.0 mV	$\Delta Y$	1.70 V	$\Delta Y$	17.0 mV

Timebase	-2.00 ms	Trigger	Ext/0 DC
	500 $\mu$ s/div	Normal	200 mV
1.00 MS	200 MS/s	Edge	Negative

LeCroy

11/11/2019 10:53:59 AM

File Vertical Timebase Trigger Display Cursors Measure Math Analysis Utilities Help



Measure	P1:mean(C1)	P2:pkpk(C2)	P3:pkpk(C3)	P4:mean(C3)	P5:mean(C4)	P6:---
value	-1.512 V	3.00 V	141 V	54.1 V	-72.5 V	
status	✓	✓	✓	✓	✓	

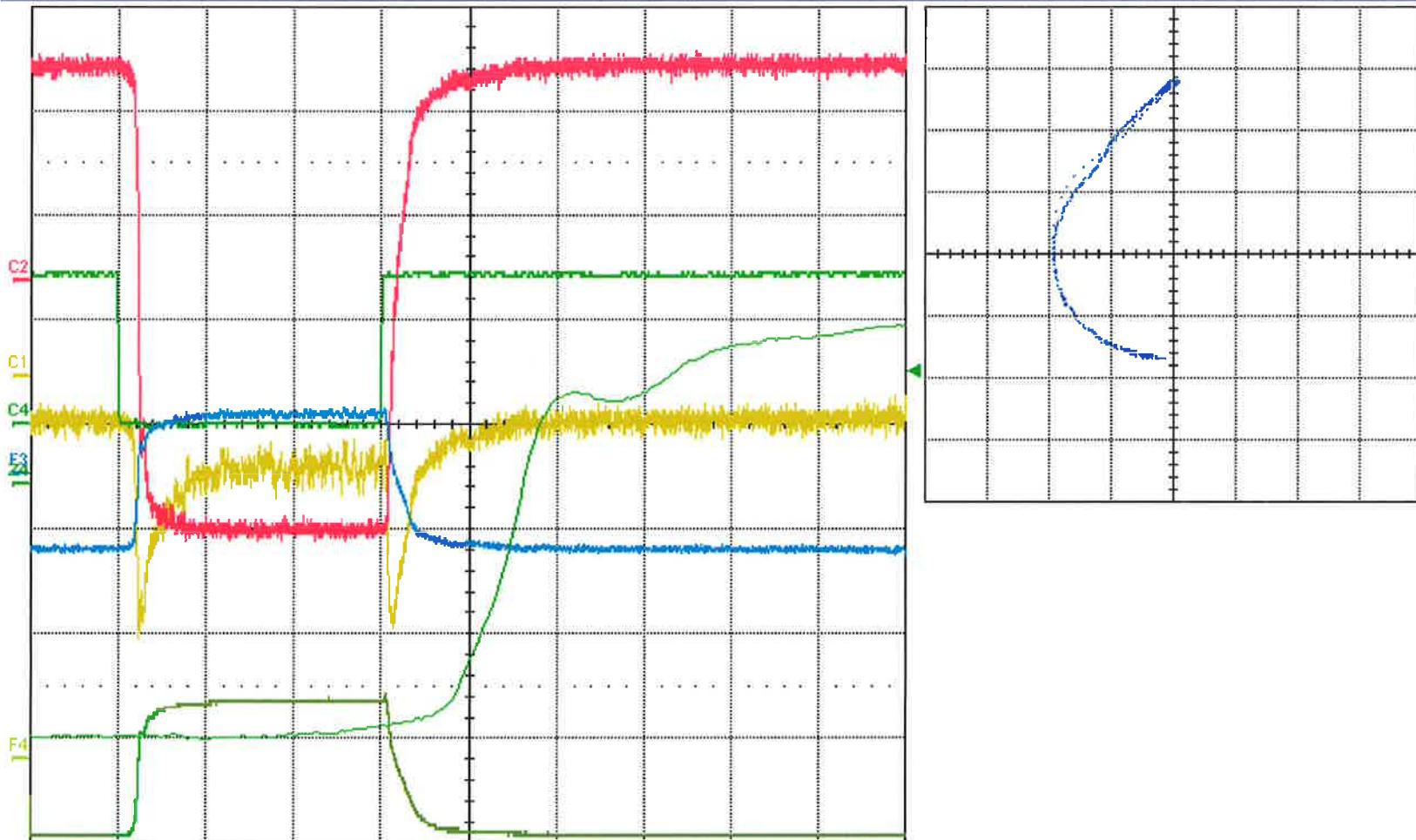
C1	DCIM	C2	DCIM	C3	DCIM	C4	DCIM
500 mV/div		1.00 V/div		100 V/div		100 V/div	
1.510 V offset		-1.840 V offset		-300.0 V offset		299.0 V offset	
↓ -909 mV	↓	347 mV	↑	65.6 V	↓	-64.1 V	
↑ -751 mV	↑	958 mV	↑	106.3 V	↑	-61.5 V	
Δy 159 mV	Δy	611 mV	Δy	40.6 V	Δy	2.6 V	

Timebase	-400 μs	Trigger	Ext/I/O DC
1.00 MS	100 μs/div	Normal	200 mV
	1.0 GS/s	Edge	Positive
X1= 314.260 μs	ΔX= 29.060 μs		
X2= 343.320 μs	1/ΔX= 34.412 kHz		

LeCroy

11/11/2019 10:53:39 AM

File Vertical Timebase Trigger Display Cursors Measure Math Analysis Utilities Help

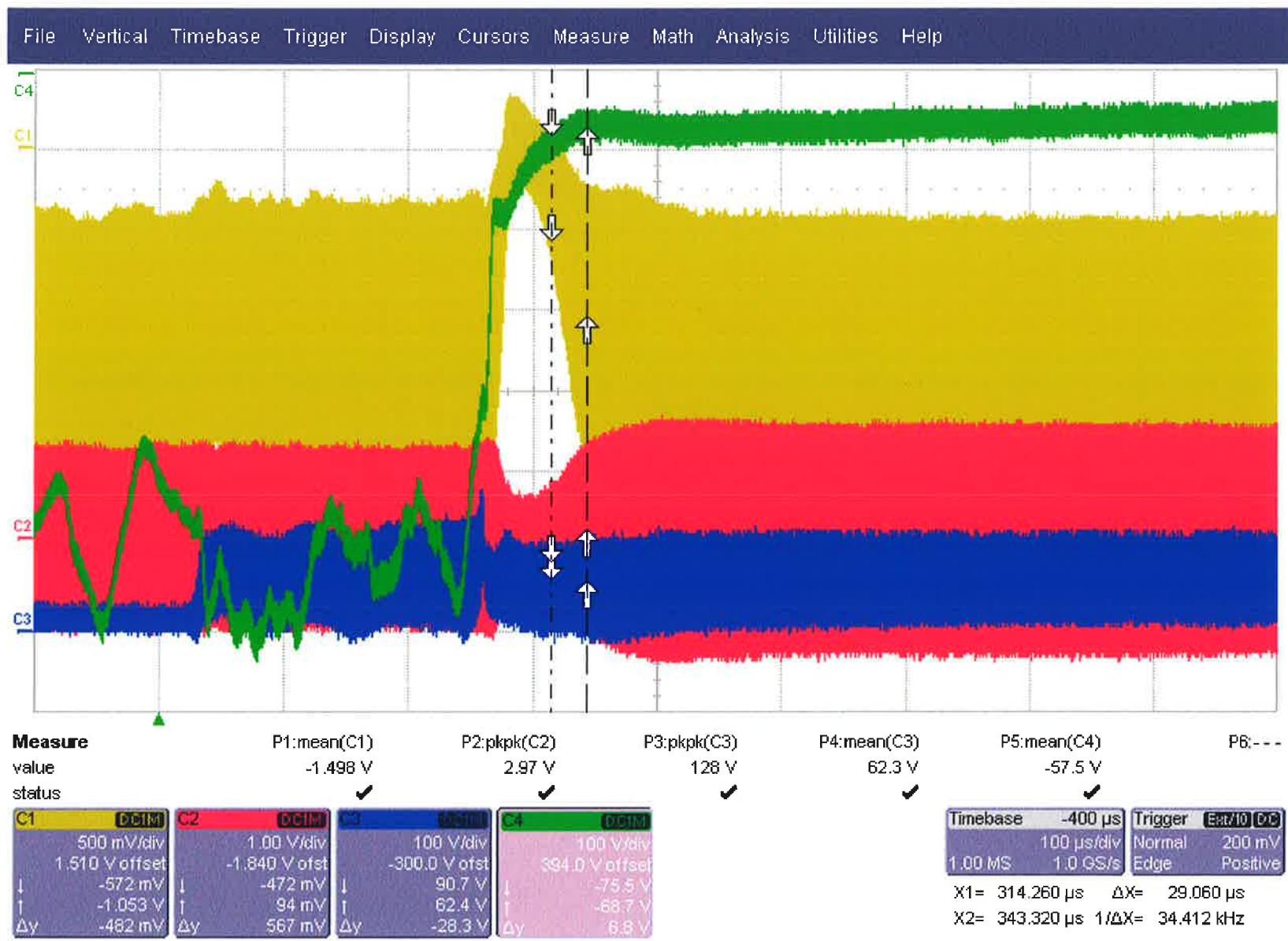


C1	D1	C2	B1	C4	F1	F3 script(	F4	<F3>	XY	XF1	Z4 zoom(
200 mV		200 mV		2.00 V	2.00		2.00	1.0 ms	200 mV	200 mV	600e-3
92 mV		274 mV		0 mV	1.0 ms		33 #		33 #		50.0 $\mu$ s
											33 #

Tbase	-4.00 ms	Trigger	C4 DC
	1.00 ms/div	Normal	1.00 V
5.00 kS	500 kS/s	Edge	Negative

LeCroy

11/11/2019 10:54:21 AM



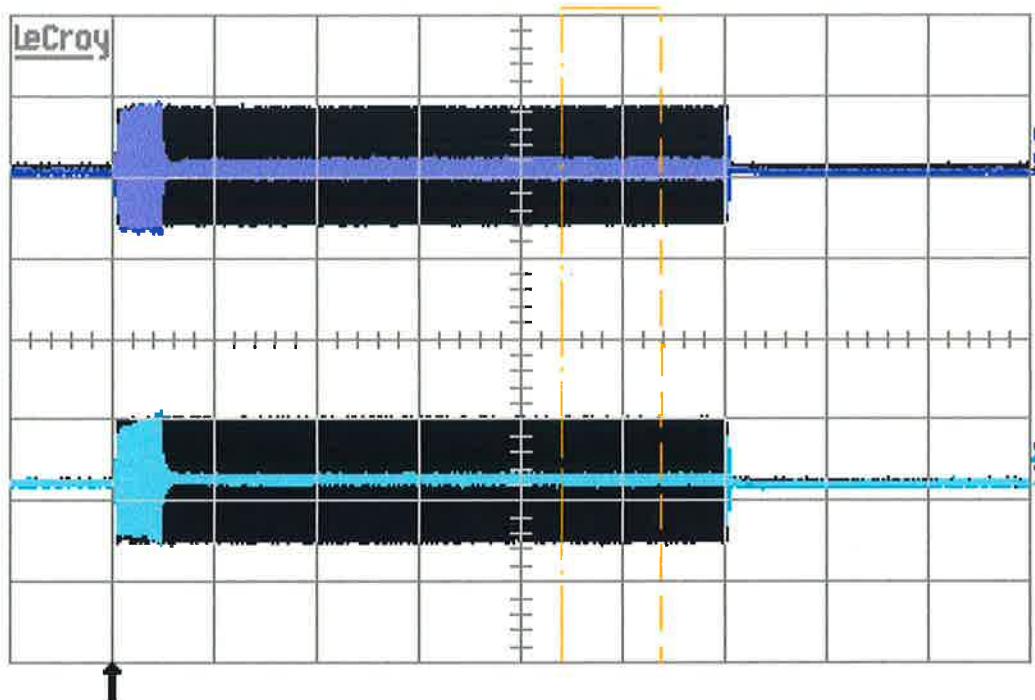
11-Nov-19  
10:56:43

1 .5 ms  
0.50 V

2 .5 ms  
200mV

3 .5 ms  
0.50 V

4 .5 ms  
200mV



5 sweeps: average low high sigma

rms(1) 250.6mV 249.8 251.3 0.7

rms(2) 18.9mV 18.0 19.5 0.6

rms(3) 266.2mV 265.4 267.0 0.7

rms(4) 11.9mV 10.5 12.8 0.9

.5 ms phase(1,3) 64.3 ° -131.5 220.1 42.6

1 .5 V AC

2 .2 V AC

3 .5 V AC

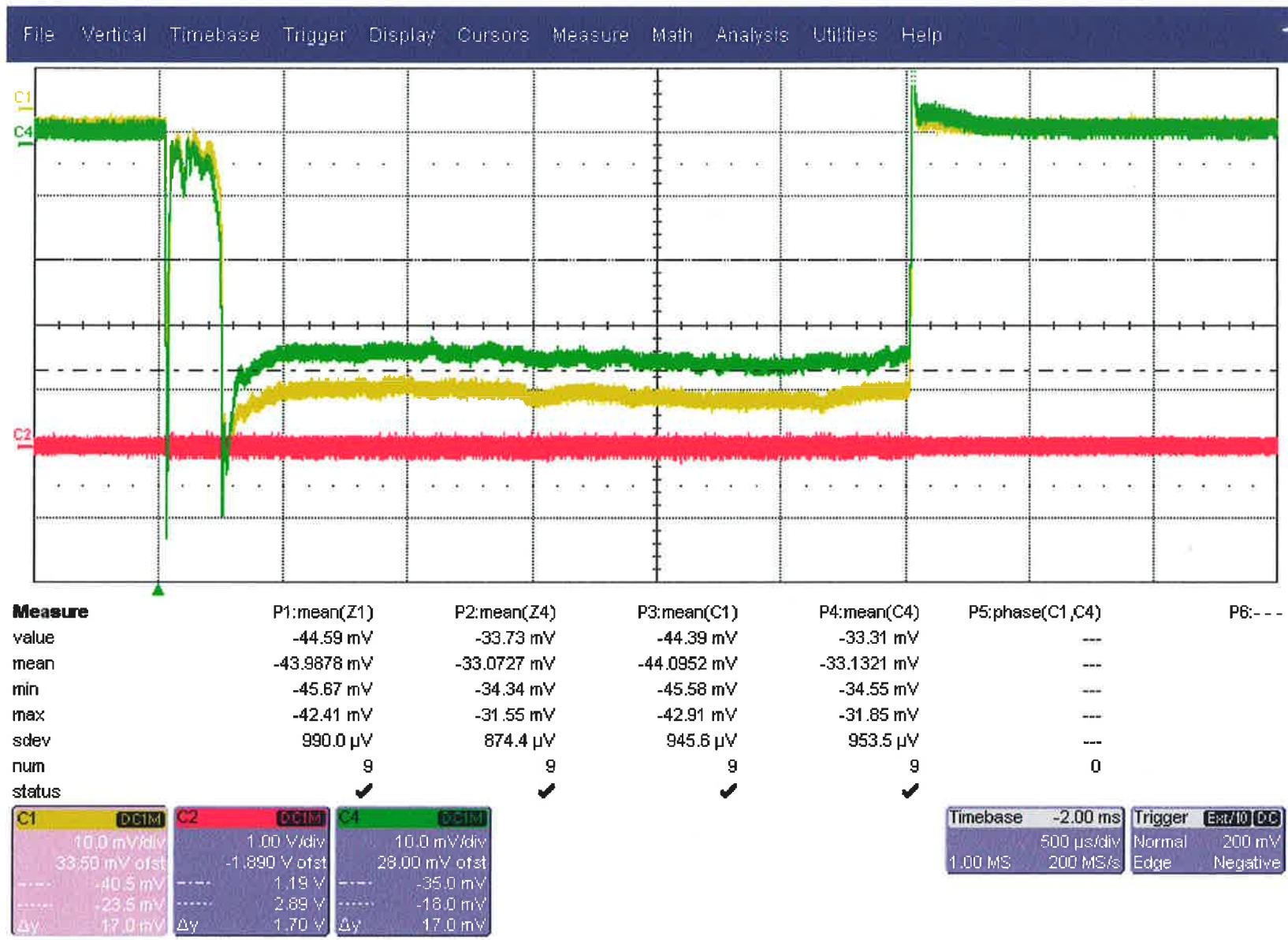
4 .2 V AC



Ext10 DC 0.60 V 1MΩ

20 MS/s

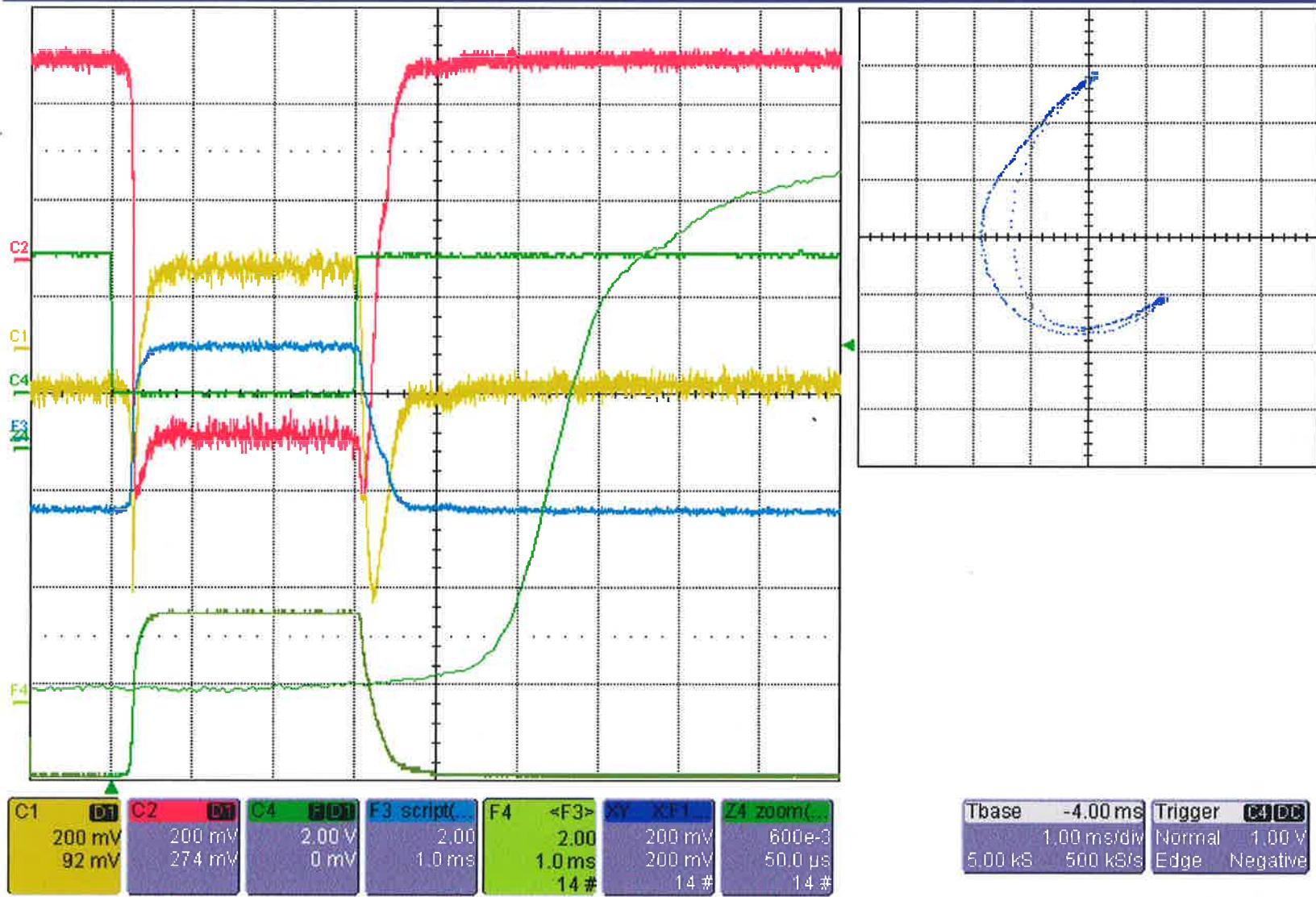
NORMAL



LeCroy

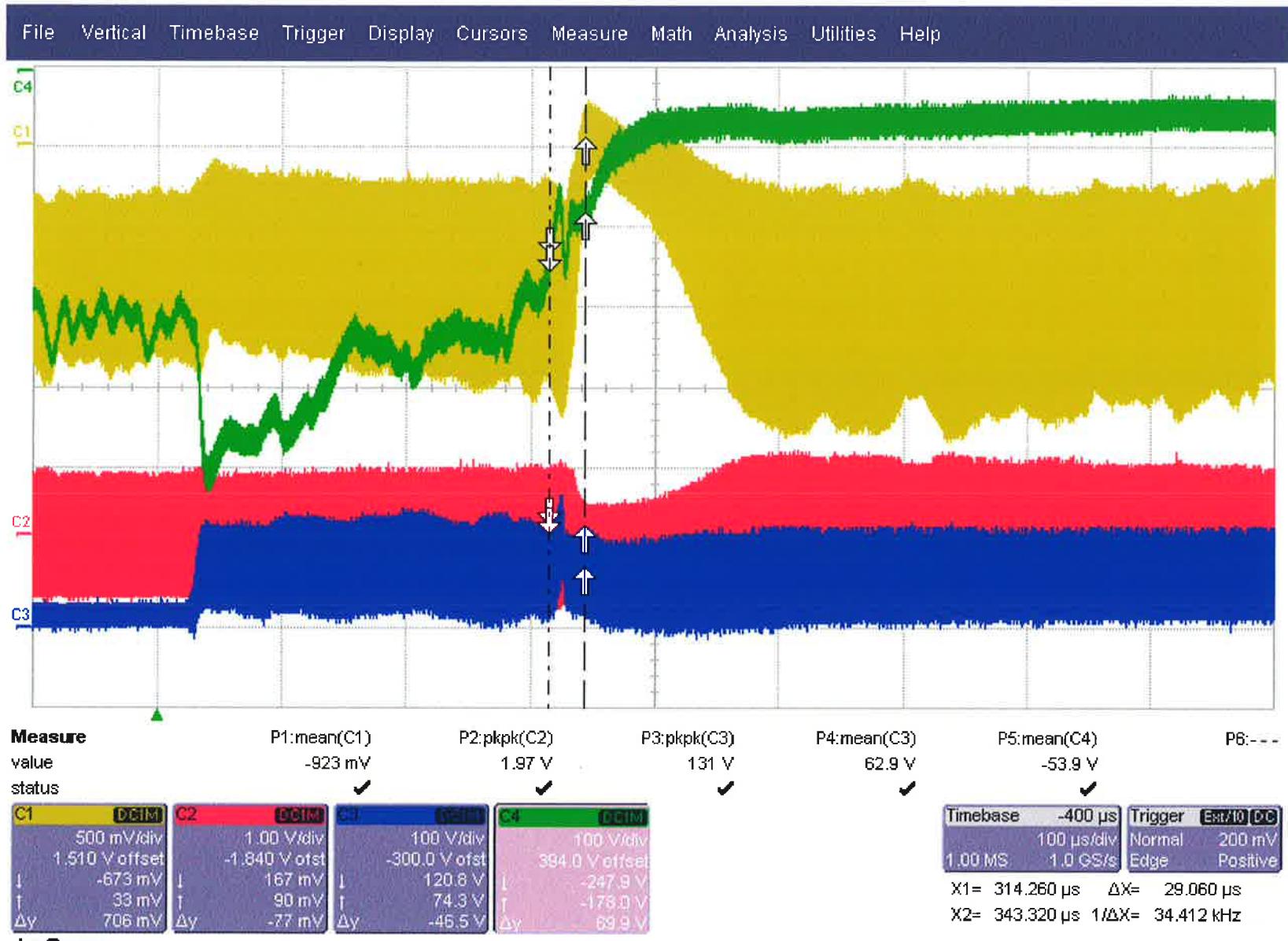
11/11/2019 10:56:32 AM

File Vertical Timebase Trigger Display Cursors Measure Math Analysis Utilities Help



LeCroy

11/11/2019 10:56:36 AM



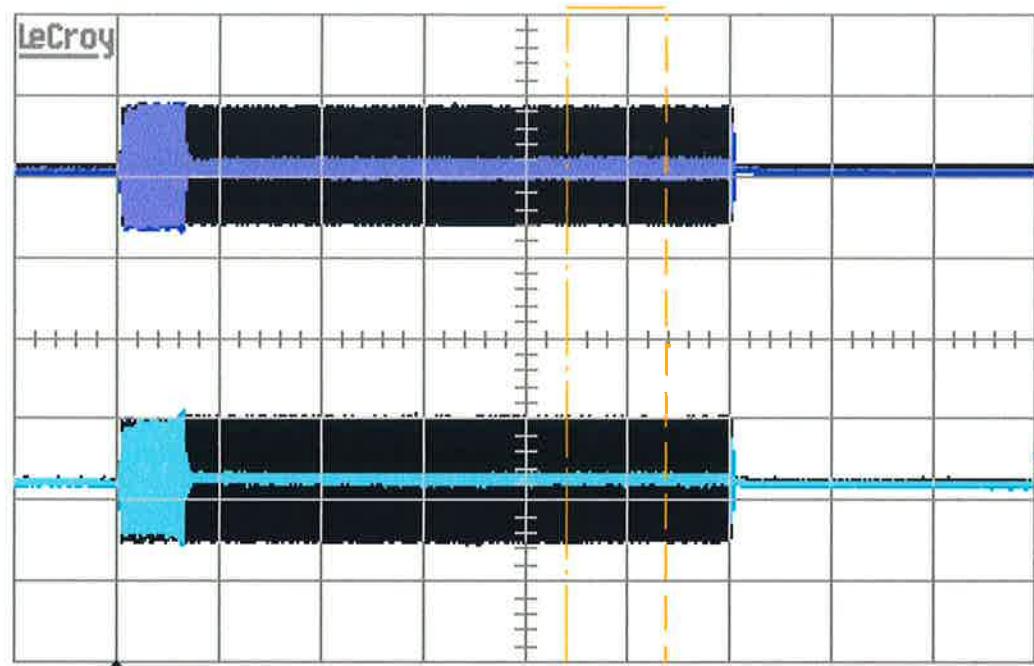
11-Nov-19  
10:59:17

1 .5 ms  
0.50 V

2 .5 ms  
200mV

3 .5 ms  
0.50 V

4 .5 ms  
200mV



.5 ms

1 .5 V AC  
2 .2 V AC  
3 .5 V AC  
4 .2 V AC



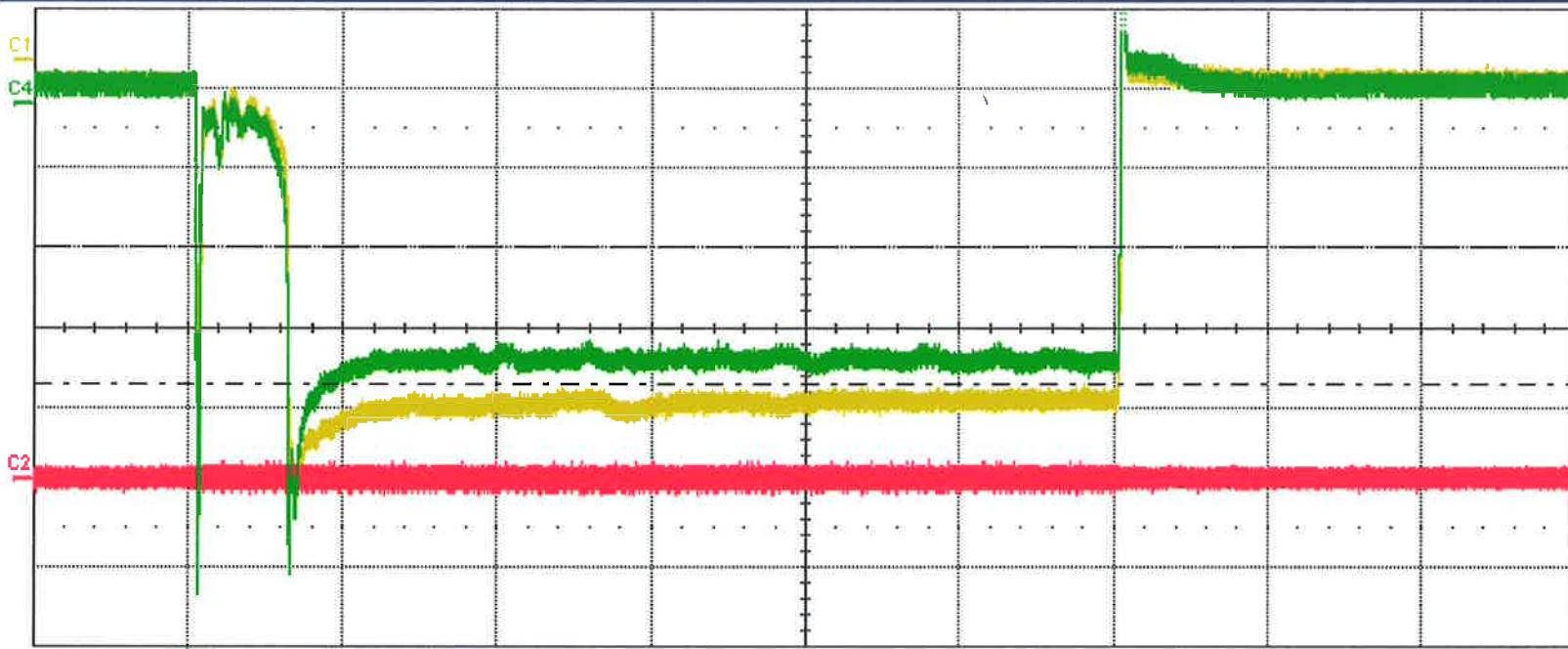
Ext10 DC 0.60 V 1MΩ

20 MS/s

NORMAL

	5 sweeps:	average	low	high	sigma
rms(1)		249.8mV	249.0	250.6	0.6
rms(2)		18.9mV	18.3	19.5	0.5
rms(3)		265.5mV	264.8	266.1	0.5
rms(4)		12.0mV	11.3	12.8	0.7
phase(1,3)		58.1 °	-131.3	218.7	40.4

File Vertical Timebase Trigger Display Cursors Measure Math Analysis Utilities Help



Measure	P1:mean(Z1)	P2:mean(Z4)	P3:mean(C1)	P4:mean(C4)	P5:phase(C1,C4)	P6:---
value	-42.95 mV	-31.86 mV	-43.03 mV	-31.94 mV	---	
mean	-43.2908 mV	-32.1814 mV	-43.5908 mV	-32.6067 mV	---	
min	-43.98 mV	-33.02 mV	-44.56 mV	-33.77 mV	---	
max	-42.72 mV	-31.56 mV	-42.98 mV	-31.79 mV	---	
sdev	424.0 $\mu$ V	436.3 $\mu$ V	540.9 $\mu$ V	661.3 $\mu$ V	---	
num	9	9	9	9	0	
status	✓	✓	✓	✓	✓	

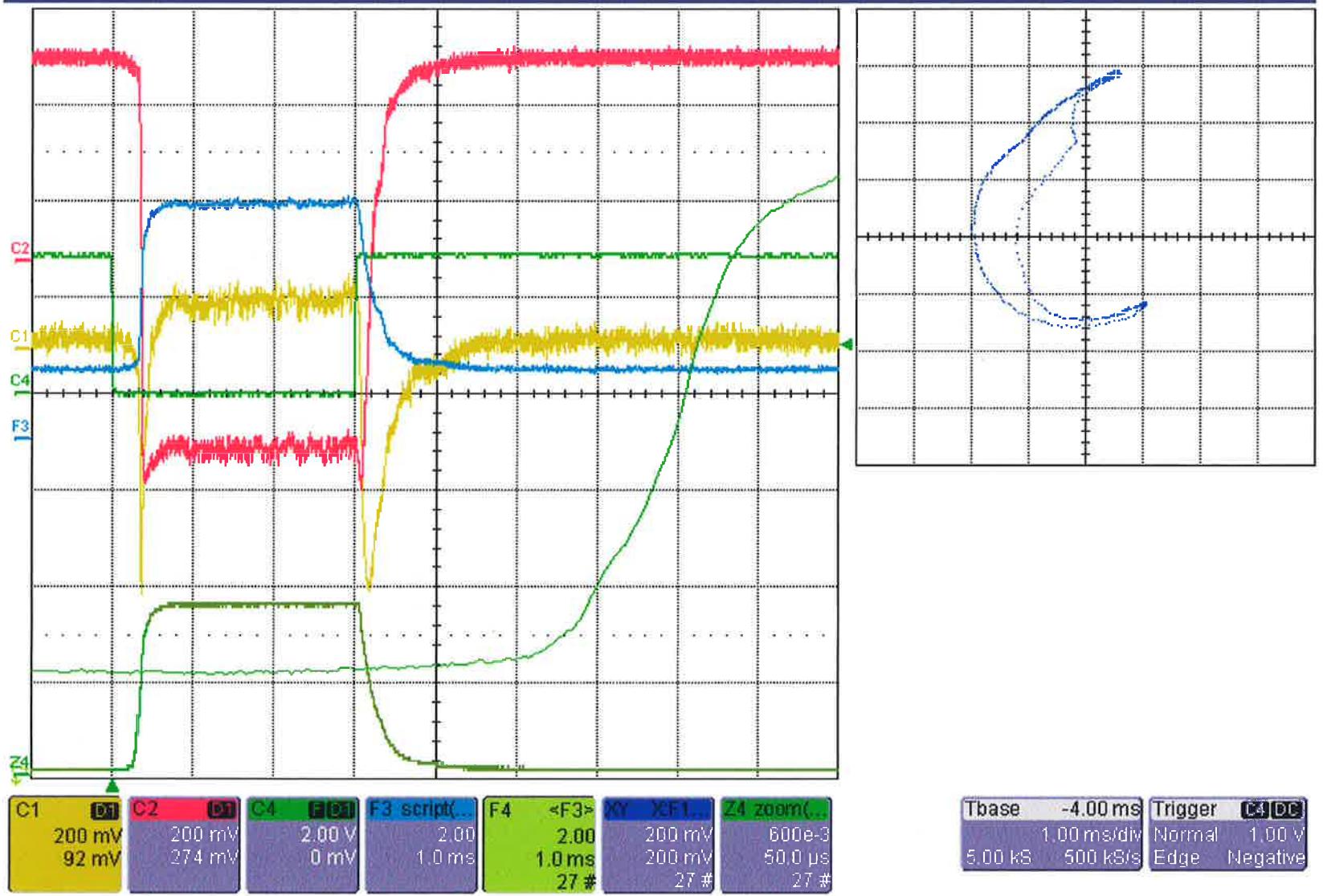
C1	DCIM	C2	DCIM	C4	DCIM
10.0 mV/div		1.00 V/div		10.0 mV/div	
33.50 mV offset		-1.890 V offset		28.00 mV offset	
----	-40.5 mV	----	1.19 V	----	-35.0 mV
-----	-23.5 mV	-----	2.89 V	-----	-18.0 mV
$\Delta Y$	17.0 mV	$\Delta Y$	1.70 V	$\Delta Y$	17.0 mV

Timebase	-2.00 ms	Trigger	Ext/10 DC
	500 $\mu$ s/div		200 mV
1.00 MS	200 MS/s	Edge	Negative

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11/11/2019 10:59:07 AM

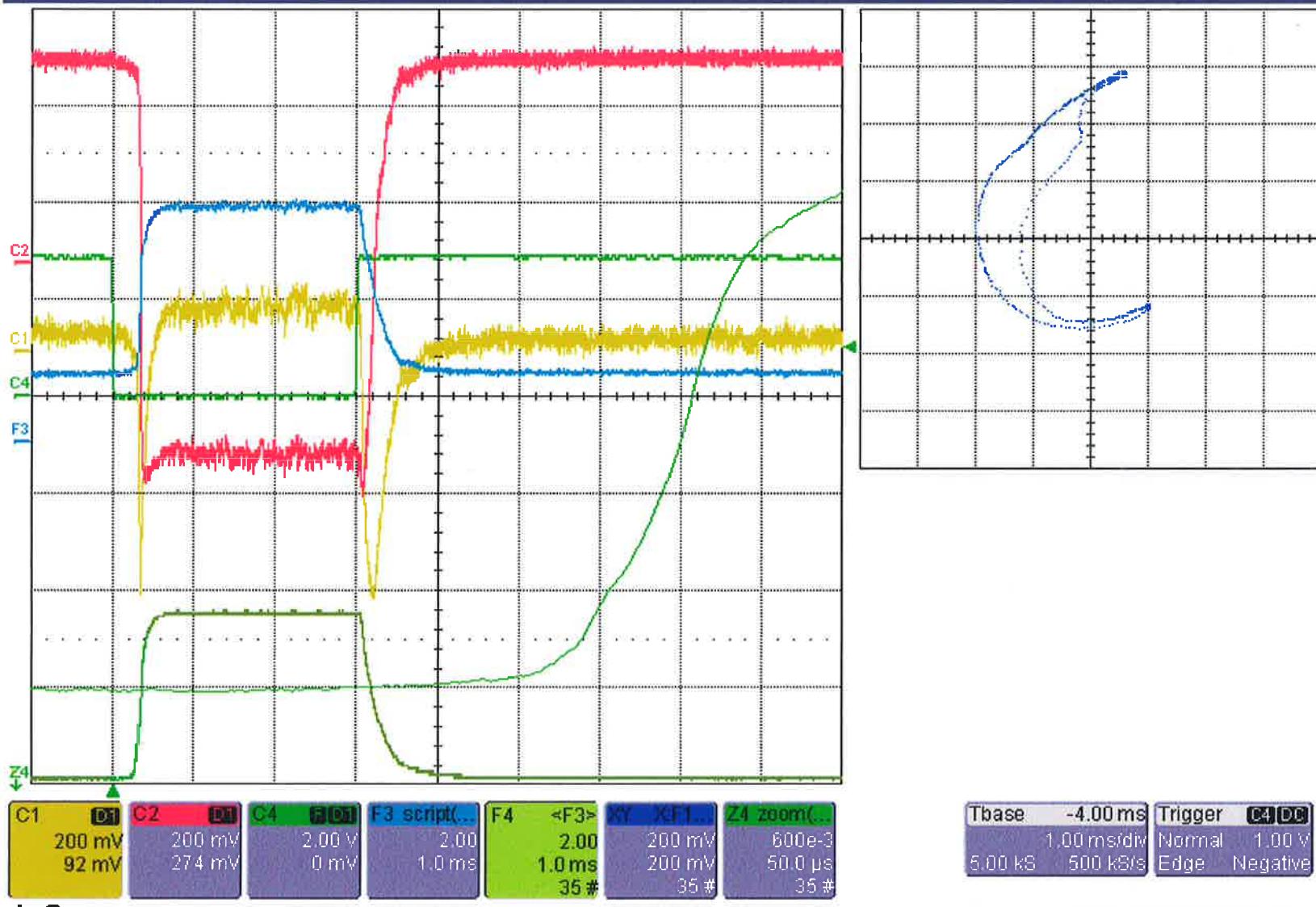
File Vertical Timebase Trigger Display Cursors Measure Math Analysis Utilities Help



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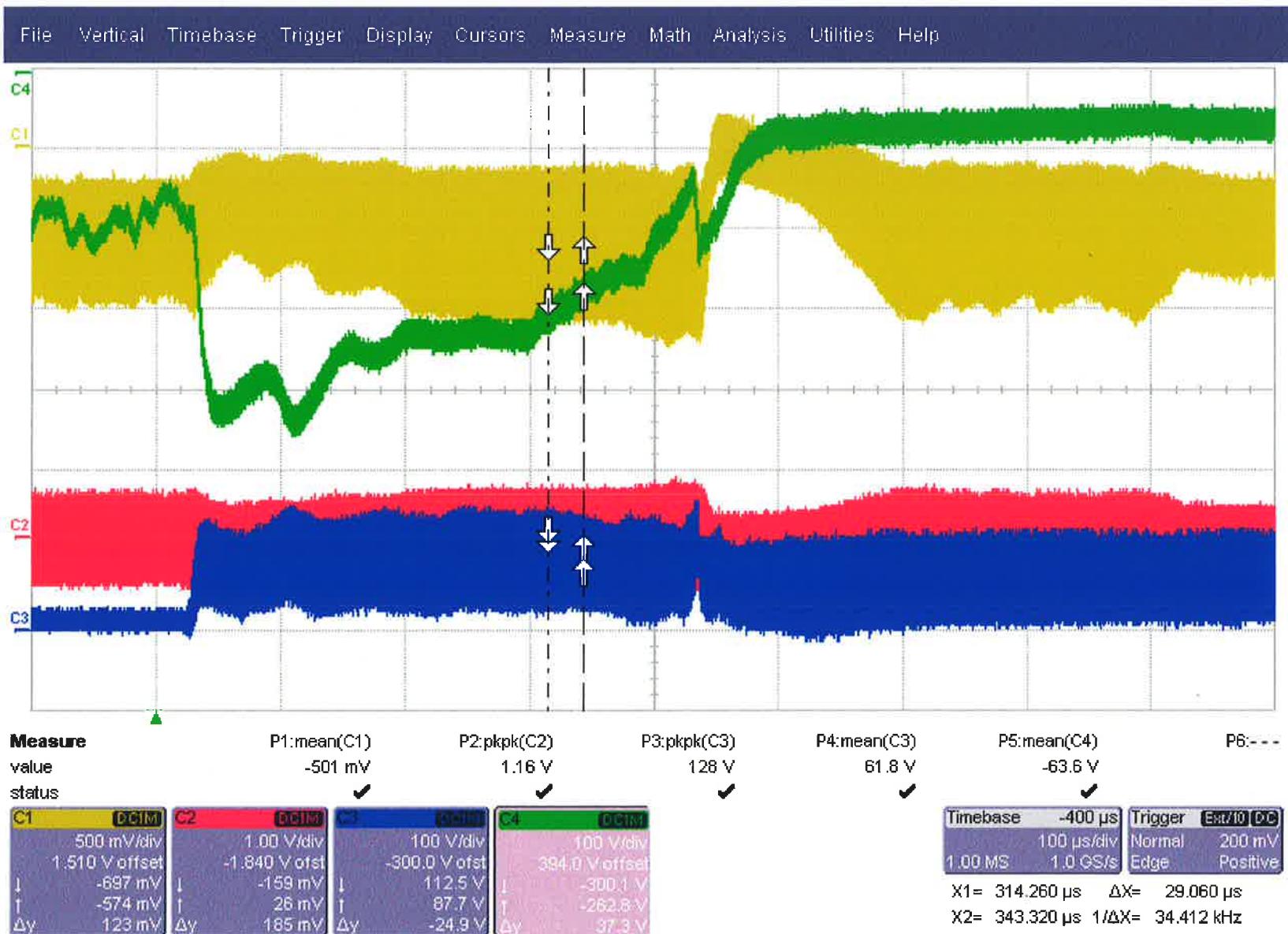
11/11/2019 10:59:23 AM

File Vertical Timebase Trigger Display Cursors Measure Math Analysis Utilities Help



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11/11/2019 10:59:32 AM



11-Nov-19  
11:01:42

1 .5 ms  
0.50 V

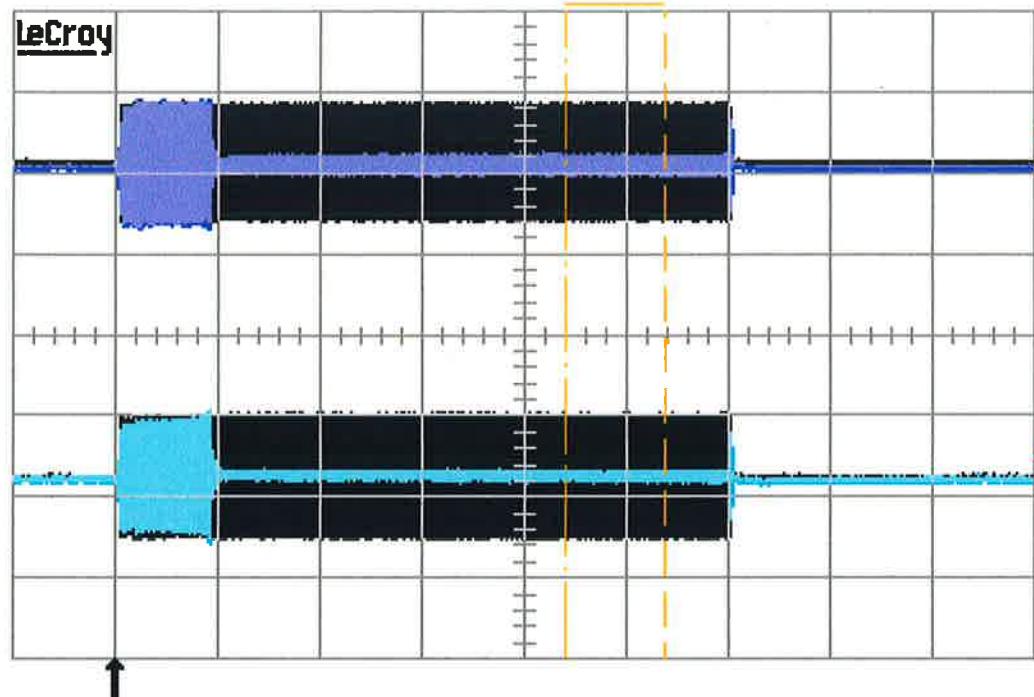
2 .5 ms  
200mV

3 .5 ms  
0.50 V

4 .5 ms  
200mV

.5 ms

1 .5 V AC  
2 .2 V AC  
3 .5 V AC  
4 .2 V AC



6 sweeps: average low high sigma

rms(1) 249.9mV 248.8 250.7 0.6

rms(2) 18.4mV 18.1 19.0 0.4

rms(3) 265.8mV 264.6 266.6 0.7

rms(4) 11.6mV 10.8 12.6 0.8

phase(1,3) 67.9 ° 29.7 220.3 40.2

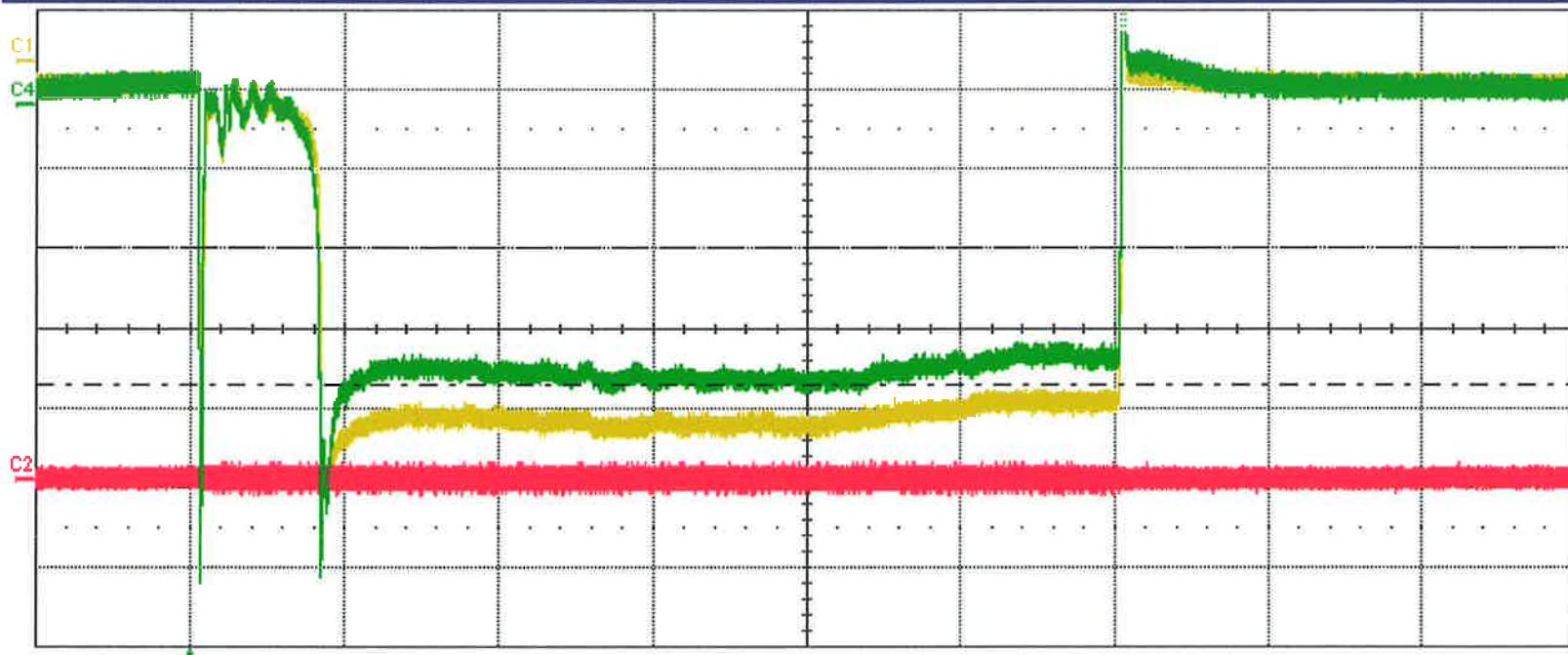


Ext10 DC 0.60 V 1MΩ

20 MS/s

NORMAL

File Vertical Timebase Trigger Display Cursors Measure Math Analysis Utilities Help



Measure	P1:mean(Z1)	P2:mean(Z4)	P3:mean(C1)	P4:mean(C4)	P5:phase(C1,C4)	P6:---
value	-45.74 mV	-34.66 mV	-45.47 mV	-34.39 mV	---	
mean	-43.8034 mV	-32.8892 mV	-43.9233 mV	-32.8144 mV	---	
min	-45.74 mV	-34.66 mV	-45.47 mV	-34.39 mV	---	
max	-42.99 mV	-31.82 mV	-42.98 mV	-31.72 mV	---	
sdev	821.2 $\mu$ V	815.1 $\mu$ V	796.5 $\mu$ V	835.3 $\mu$ V	---	
num	9	9	9	9	0	
status	✓	✓	✓	✓	✓	

C1	DCIM	C2	DCIM	C4	DCIM
10.0 mV/div		1.00 V/div		10.0 mV/div	
33.50 mV offset		-1.890 V offset		28.00 mV offset	
---- -40.5 mV		---- 1.19 V		---- -35.0 mV	
---- -23.5 mV		---- 2.09 V		---- -18.0 mV	
$\Delta y$ 17.0 mV		$\Delta y$ 1.70 V		$\Delta y$ 17.0 mV	

Timebase	-2.00 ms	Trigger	Ext/10 DC
	500 $\mu$ s/div	Normal	200 mV
1.00 MS	200 MS/s	Edge	Negative

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11/11/2019 11:01:31 AM