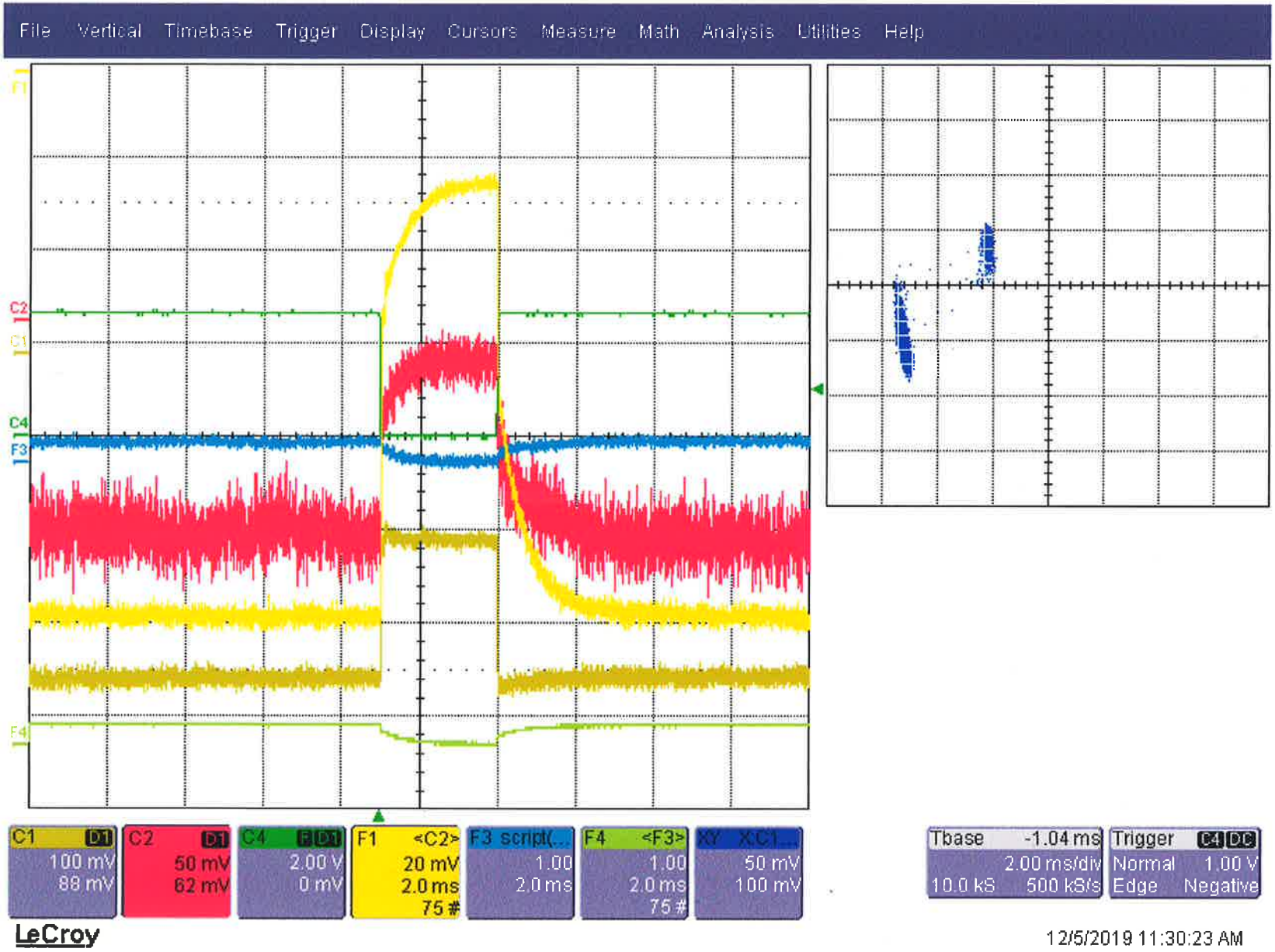
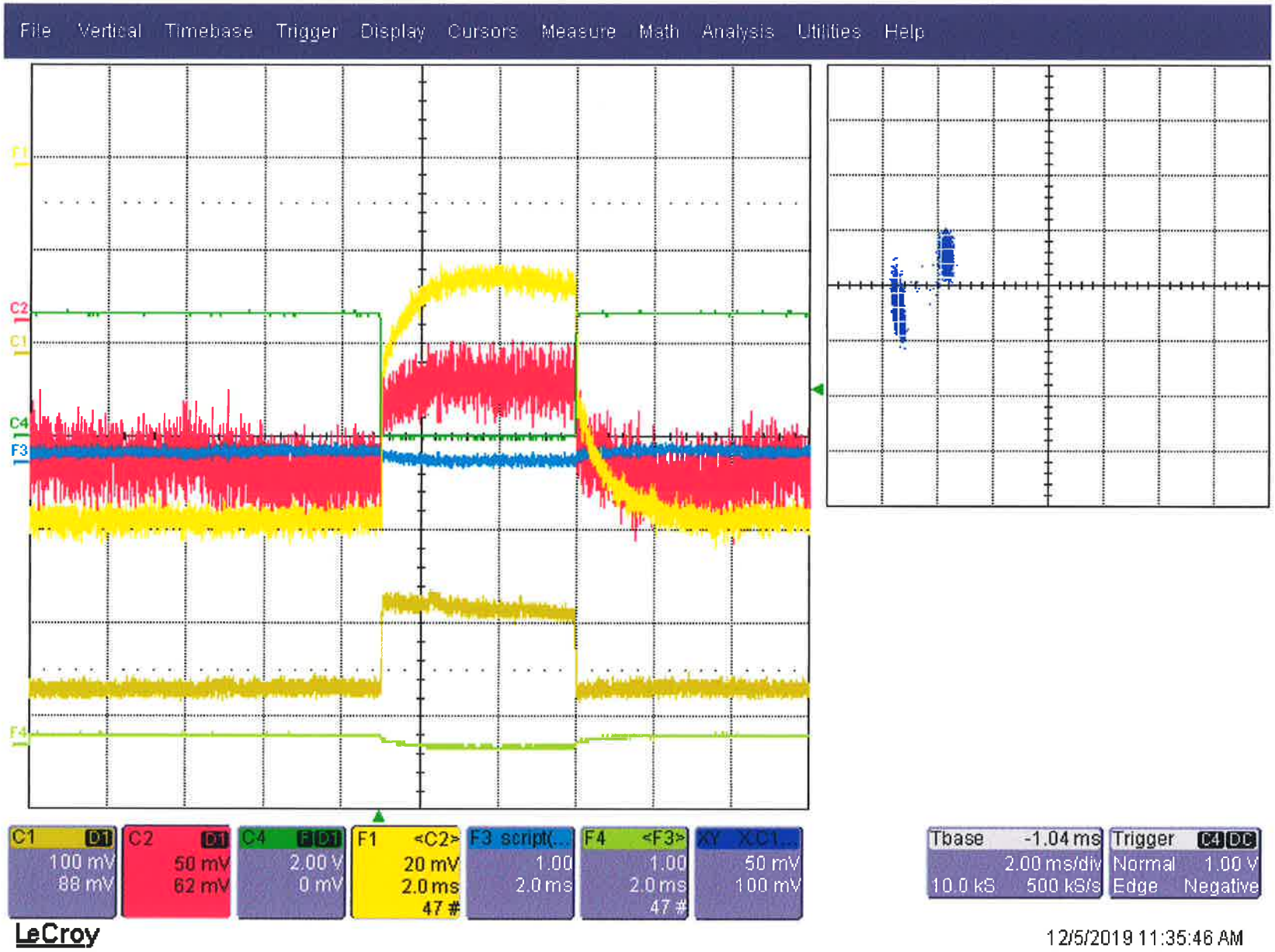
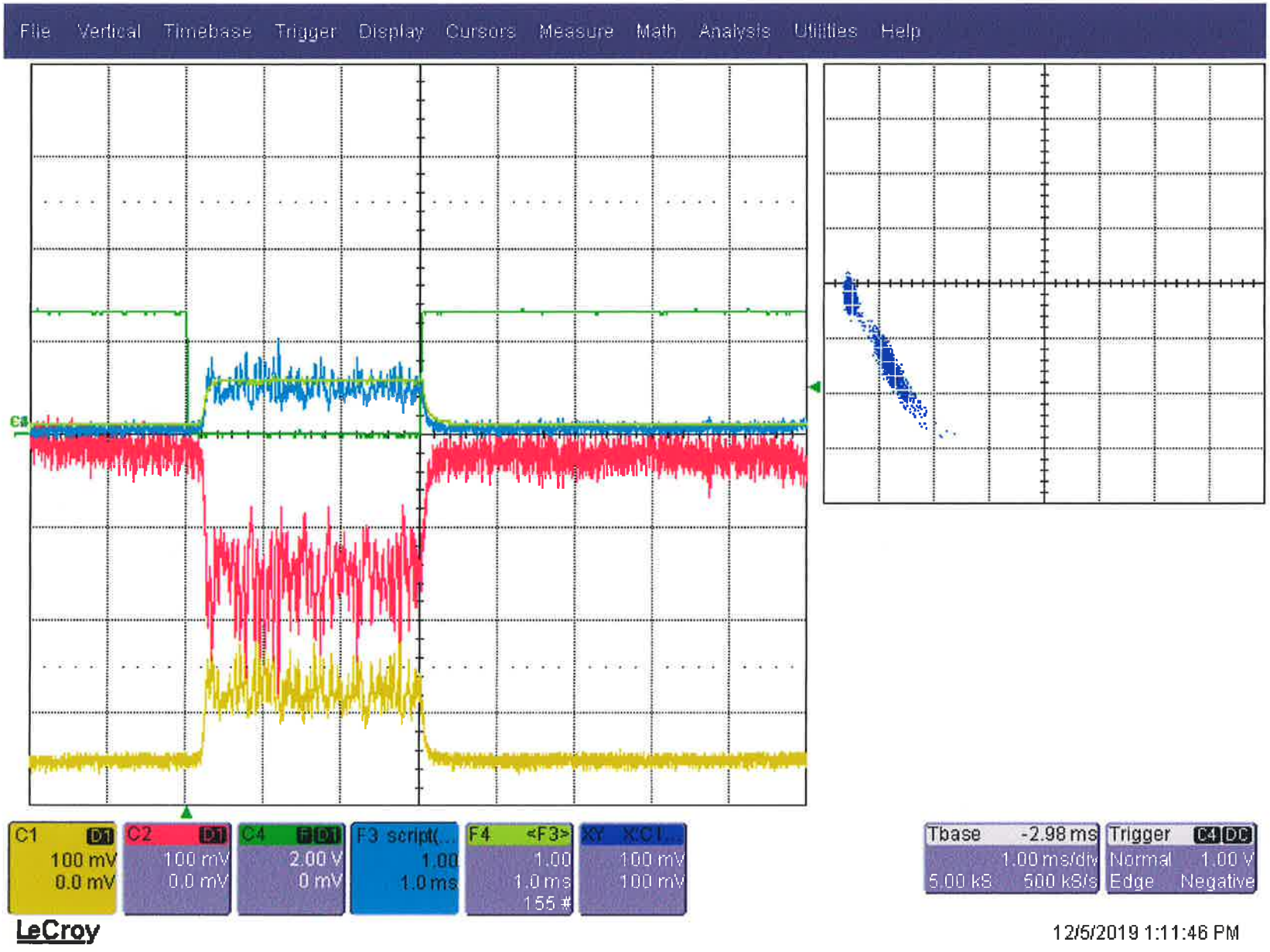
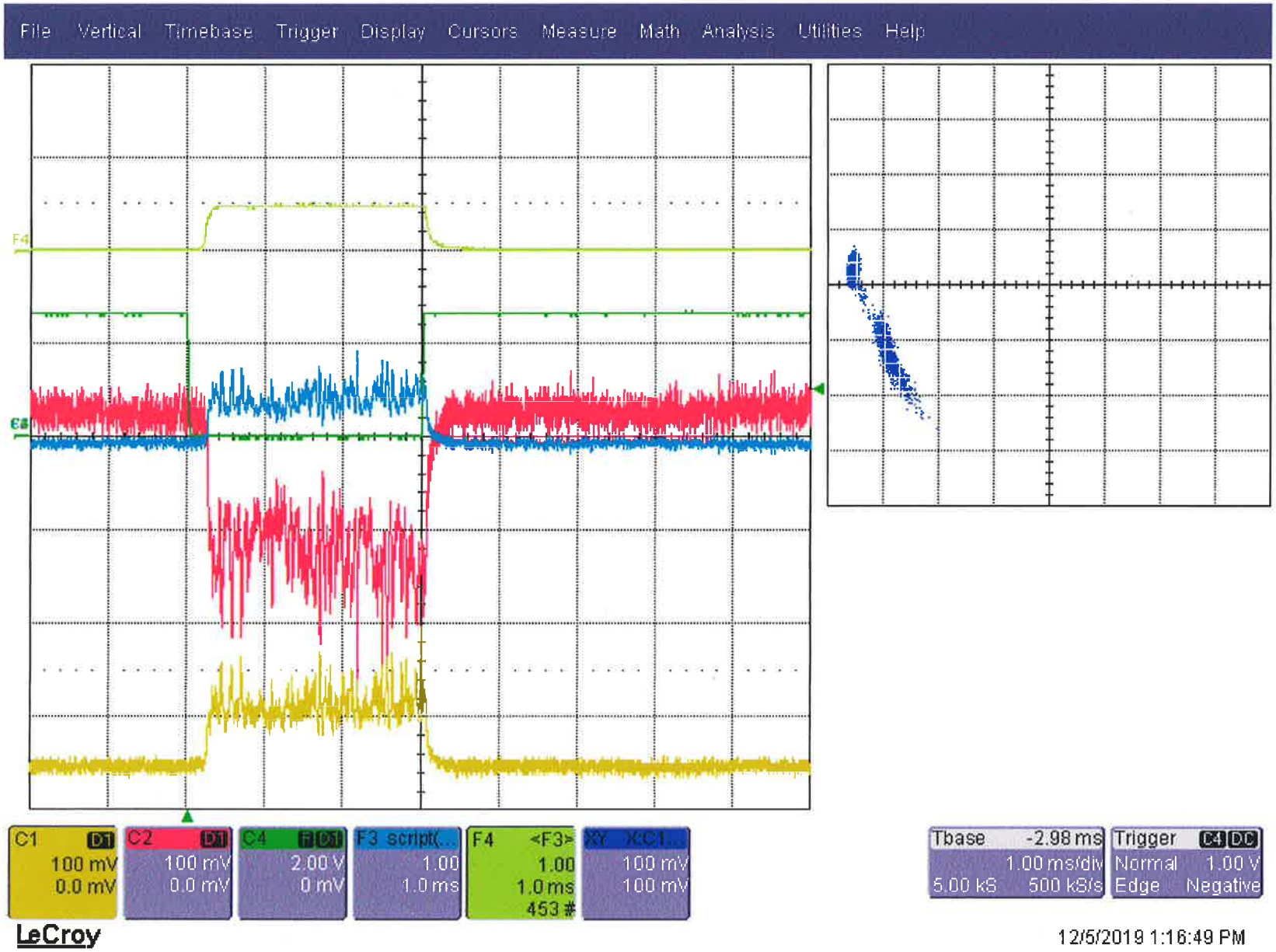
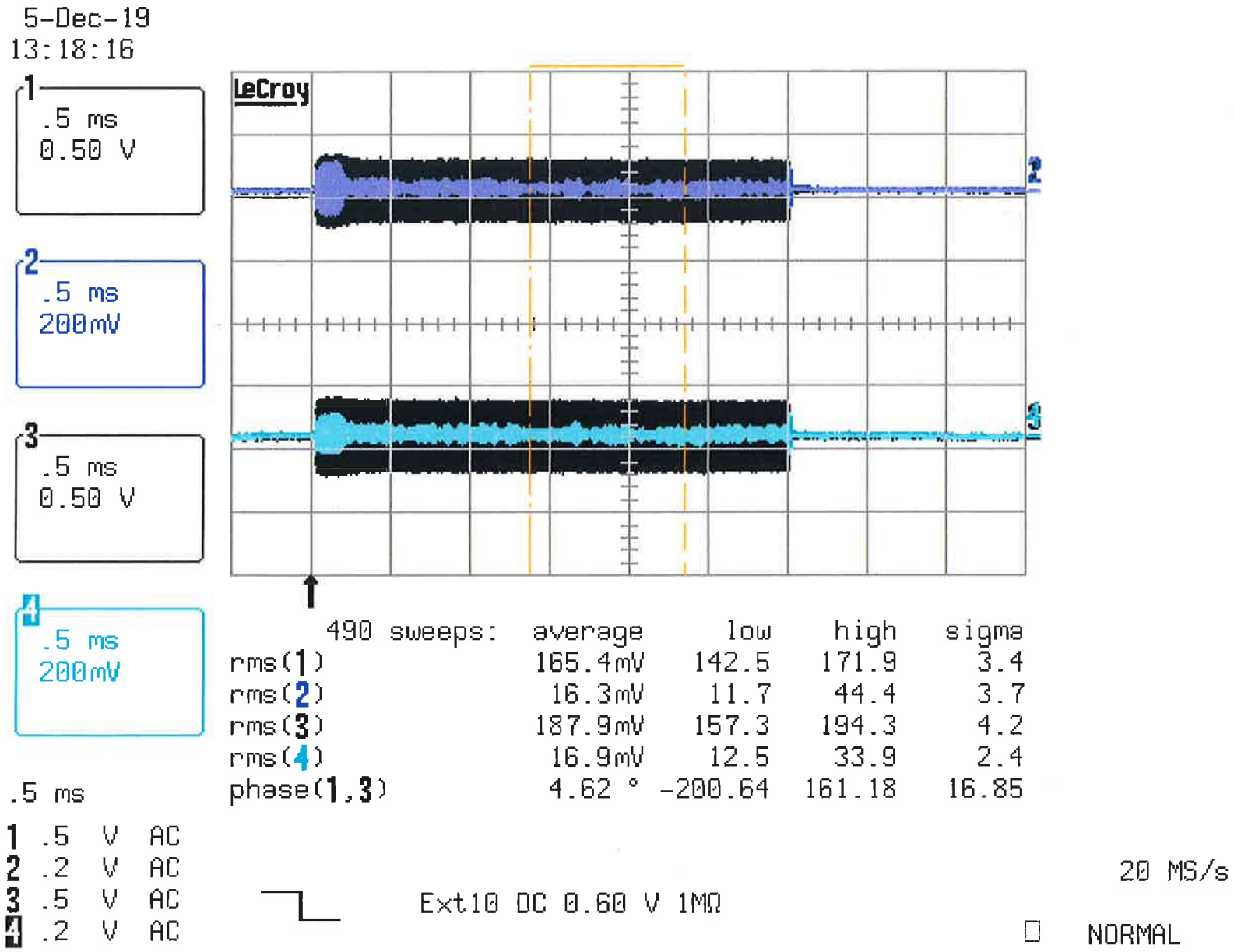
RMF into vacuum, 3ms, RMF pickup visible in CCFB

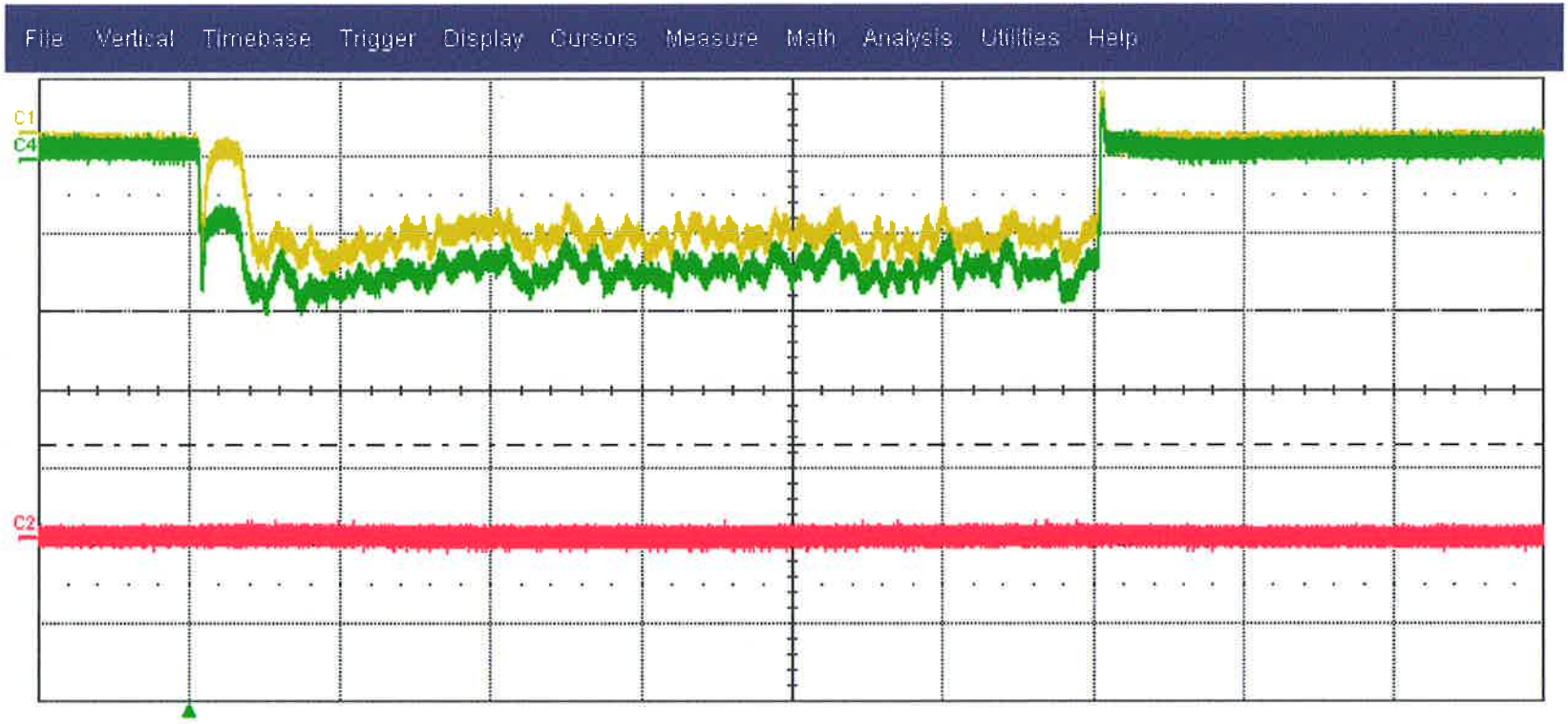

File Vertical Timebase Trigger Display Cursors Measure Math Analysis Utilities Help
F1
C2
C1
C4
F3
F4
C1 D1
100 mV
88 mV
C2 D1
50 mV
62 mV
C4 F D1
2.00 V
0 mV
F1 <C2>
20 mV
2.0 ms
75 #
F3 script(...
1.00
2.0 ms
F4 <F3>
1.00
2.0 ms
75 #
XY XC1...
50 mV
100 mV
Tbase -1.04 ms
2.00 ms/div
10.0 kS 500 kS/s
Trigger C4 DC
Normal 1.00 V
Edge Negative
LeCroy
12/5/2019 11:30:23 AM


File Vertical Timebase Trigger Display Cursors Measure Math Analysis Utilities Help
F1
C2
C1
C4
F3
F4
C1 D1
100 mV
88 mV
C2 D1
50 mV
62 mV
C4 F D1
2.00 V
0 mV
F1 <C2>
20 mV
2.0 ms
47 #
F3 script(...
1.00
2.0 ms
F4 <F3>
1.00
2.0 ms
47 #
XY XC1...
50 mV
100 mV
Tbase -1.04 ms
2.00 ms/div
10.0 kS 500 kS/s
Trigger C4 DC
Normal 1.00 V
Edge Negative
LeCroy
12/5/2019 11:35:46 AM


File Vertical Timebase Trigger Display Cursors Measure Math Analysis Utilities Help
C1 D1
100 mV
0.0 mV
C2 D1
100 mV
0.0 mV
C4 D1
2.00 V
0 mV
F3 script(...
1.00
1.0 ms
F4 <F3>
1.00
1.0 ms
155 #
XY XC1...
100 mV
100 mV
Tbase -2.98 ms
1.00 ms/div
5.00 kS 500 kS/s
Trigger C4 DC
Normal 1.00 V
Edge Negative
LeCroy
12/5/2019 1:11:46 PM


File Vertical Timebase Trigger Display Cursors Measure Math Analysis Utilities Help
F4
C1 D1
100 mV
0.0 mV
C2 D1
100 mV
0.0 mV
C4 D1
2.00 V
0 mV
F3 script(...
1.00
1.0 ms
F4 <F3>
1.00
1.0 ms
453 #
XY XC1...
100 mV
100 mV
Tbase -2.98 ms
1.00 ms/div
5.00 kS 500 kS/s
Trigger C4 DC
Normal 1.00 V
Edge Negative
LeCroy
12/5/2019 1:16:49 PM


5-Dec-19
13:18:16
1
.5 ms
0.50 V
2
.5 ms
200mV
3
.5 ms
0.50 V
4
.5 ms
200mV
LeCroy
490 sweeps: average low high sigma
rms(1) 165.4mV 142.5 171.9 3.4
rms(2) 16.3mV 11.7 44.4 3.7
rms(3) 187.9mV 157.3 194.3 4.2
rms(4) 16.9mV 12.5 33.9 2.4
phase(1,3) 4.62 ° -200.64 161.18 16.85
.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



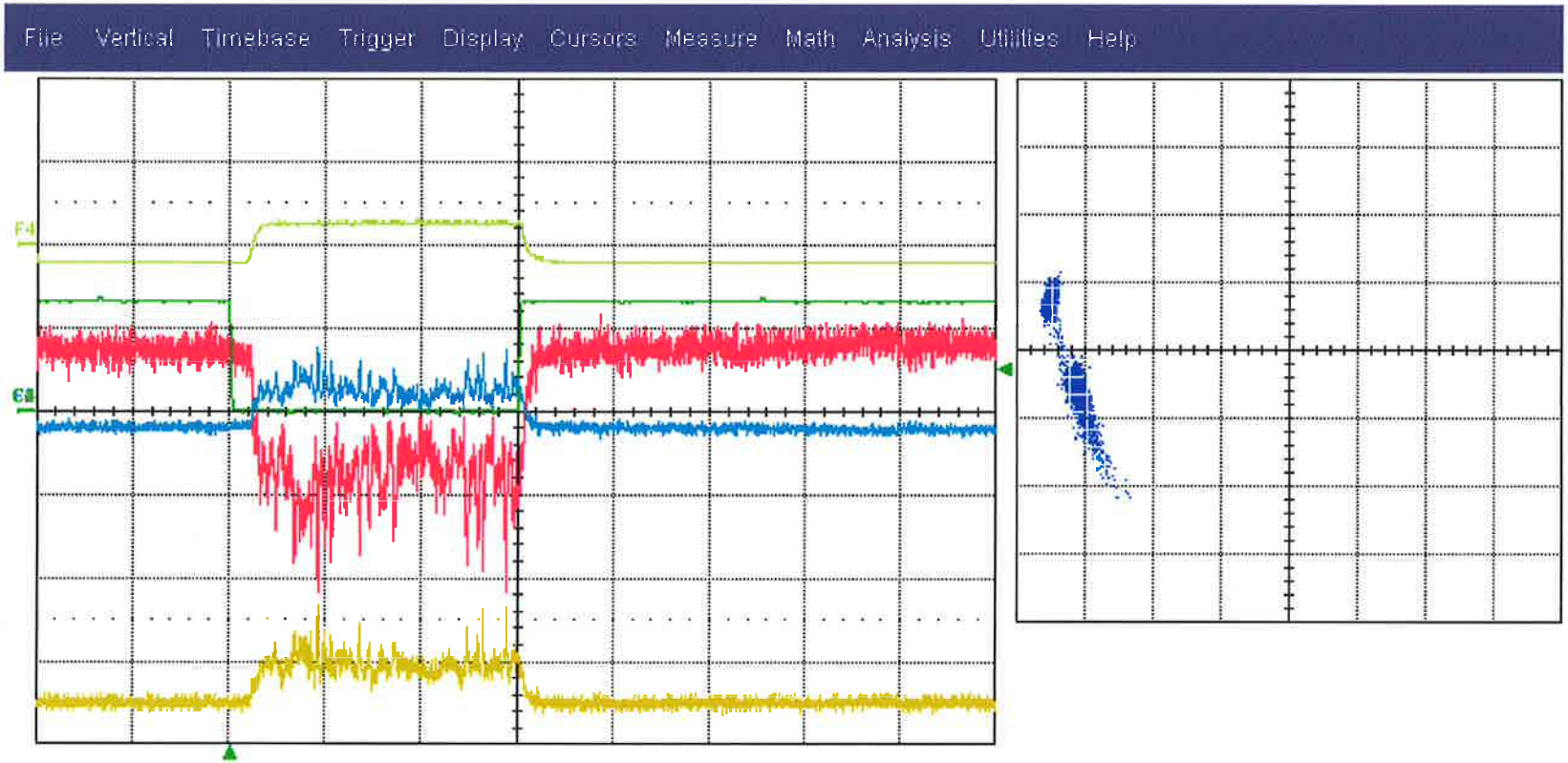
Measure	P1:mean(Z1)	P2:mean(Z4)	P3:mean(C1)	P4:mean(C4)	P5:phase(C1,C4)	P6:- - -
value	-25.12 mV	-26.69 mV	-26.83 mV	-28.47 mV	-6.51921637135 °	
mean	-27.2443 mV	-28.3602 mV	-26.5229 mV	-28.1185 mV	-22.98924397 °	
min	-30.17 mV	-31.52 mV	-28.73 mV	-30.34 mV	-169.73148826979 °	
max	-24.29 mV	-25.78 mV	-23.95 mV	-25.47 mV	93.77177837074 °	
sdev	1.8226 mV	1.9558 mV	1.0862 mV	1.2813 mV	74.0538555395928 °	
num	22	22	22	22	11	
status	✔	✔	✔	✔	✔	

C1 DCIM	C2 DCIM	C4 DCIM
20.0 mV/div	1.00 V/div	20.0 mV/div
66.00 mV ofst	-1.890 V ofst	59.00 mV ofst
---- -80.0 mV	---- 1.19 V	---- -73.0 mV
------ -46.0 mV	------ 2.89 V	------ -39.0 mV
Δy 34.0 mV	Δy 1.70 V	Δy 34.0 mV

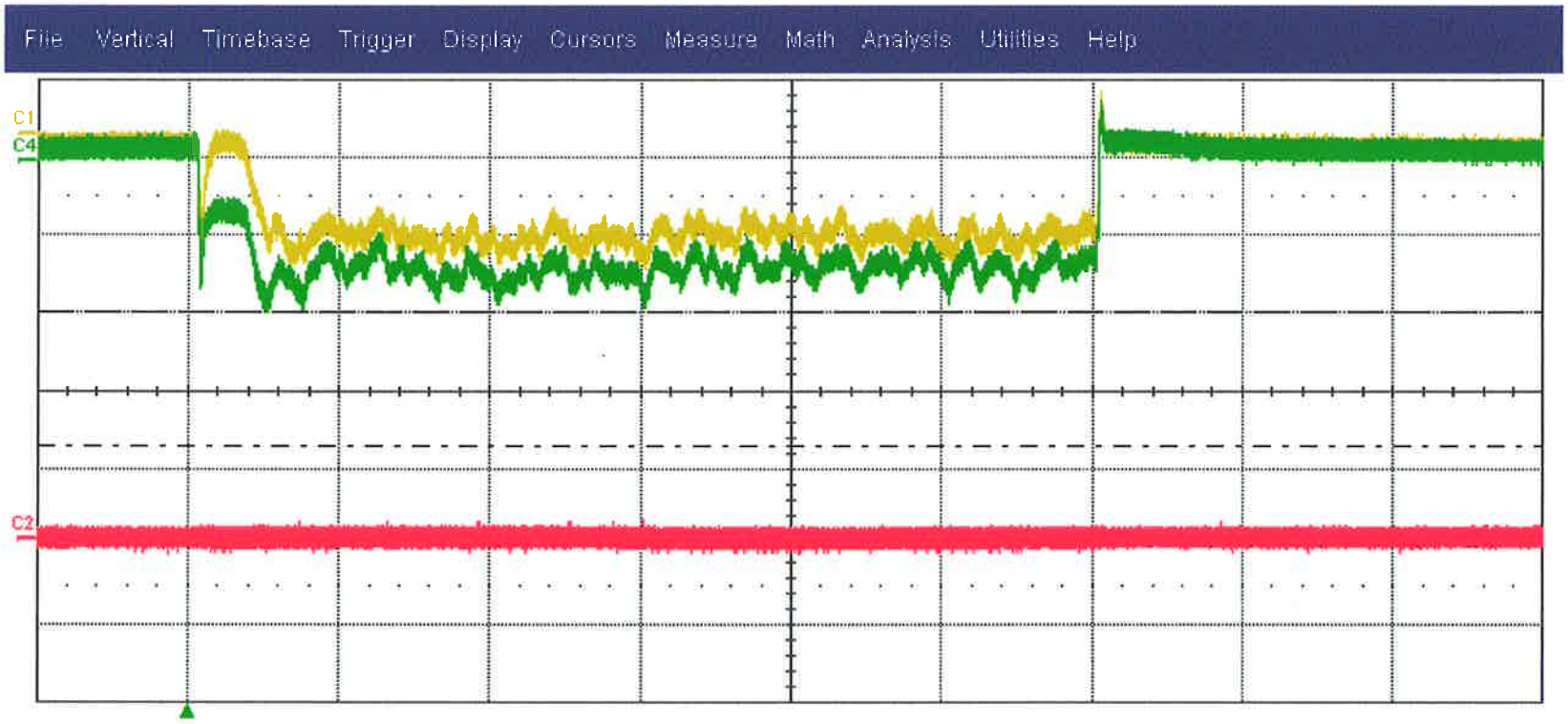
Timebase -2.00 ms	Trigger Ext/10 DC
500 µs/div	Normal 200 mV
1.00 MS 200 MS/s	Edge Negative

LeCroy

12/5/2019 1:16:56 PM



Measure	P1:pkpk(F4)	P2:pkpk(C1)	P3:mean(C2)	P4:pkpk(C2)	P5:mean(C3)	P6:mean(F4)	P7:mean(C1)	P8:mean(C4)
value	532.0e-3							
mean	532.012e-3							
min	532.0e-3							
max	532.0e-3							
sdev	---							
num	1							
status	✔							



Measure	P1:mean(Z1)	P2:mean(Z4)	P3:mean(C1)	P4:mean(C4)	P5:phase(C1,C4)	P6:- - -
value	-25.19 mV	-25.17 mV	-25.66 mV	-27.65 mV	---	
mean	-26.5495 mV	-27.8795 mV	-26.6432 mV	-28.1200 mV	-16.18930266 °	
min	-31.37 mV	-32.76 mV	-29.49 mV	-31.11 mV	-173.66243935654 °	
max	-20.20 mV	-20.70 mV	-23.66 mV	-24.87 mV	177.65100399984 °	
sdev	2.1571 mV	2.3783 mV	1.0681 mV	1.2388 mV	62.2749203010391 °	
num	271	271	271	271	123	
status	✔	✔	✔	✔		

C1 DCIM
20.0 mV/div
66.00 mV ofst
---- -80.0 mV
..... -46.0 mV
Δy 34.0 mV

C2 DCIM
1.00 V/div
-1.890 V ofst
---- 1.19 V
..... 2.89 V
Δy 1.70 V

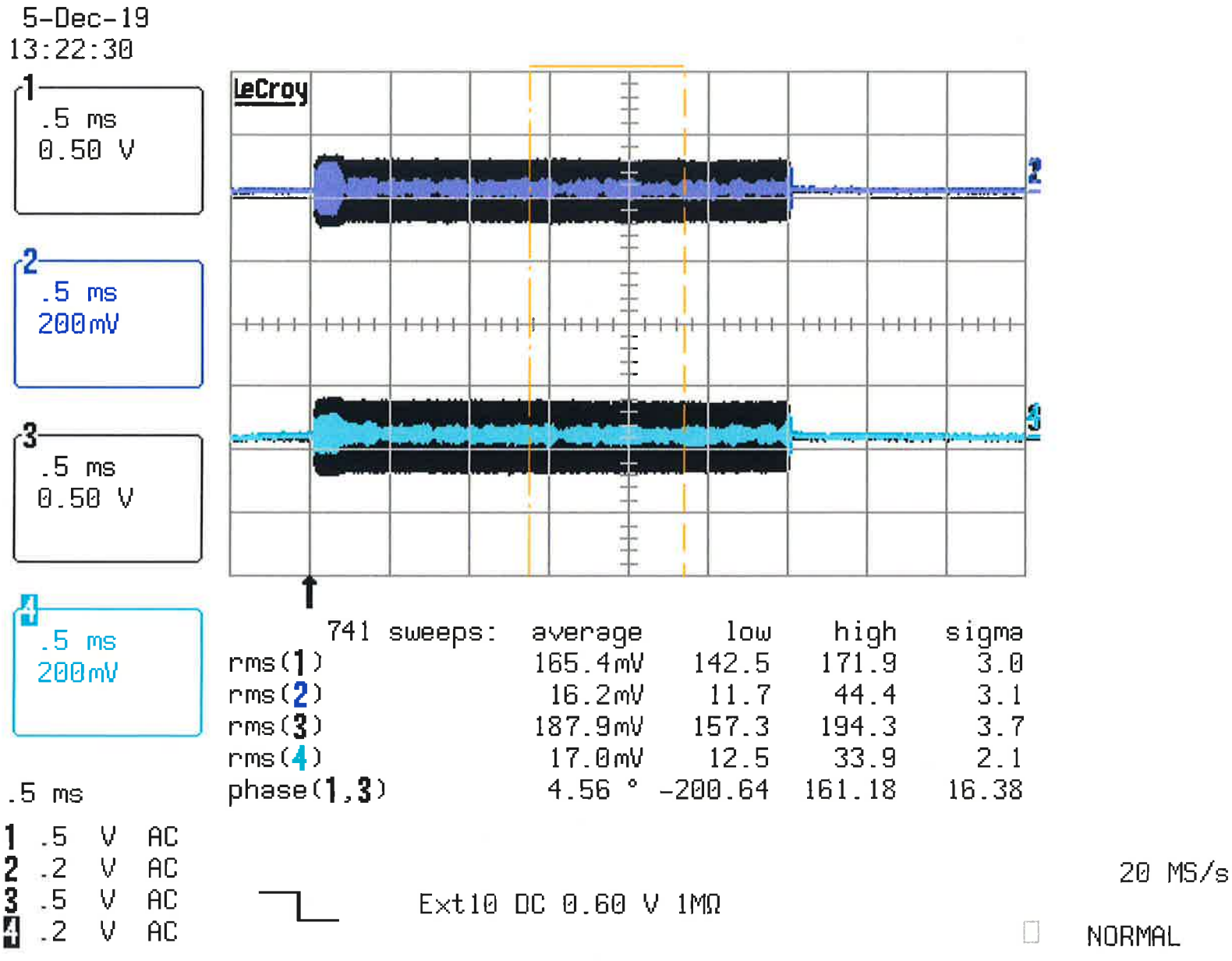
C4 DCIM
20.0 mV/div
59.00 mV ofst
---- -73.0 mV
..... -39.0 mV
Δy 34.0 mV

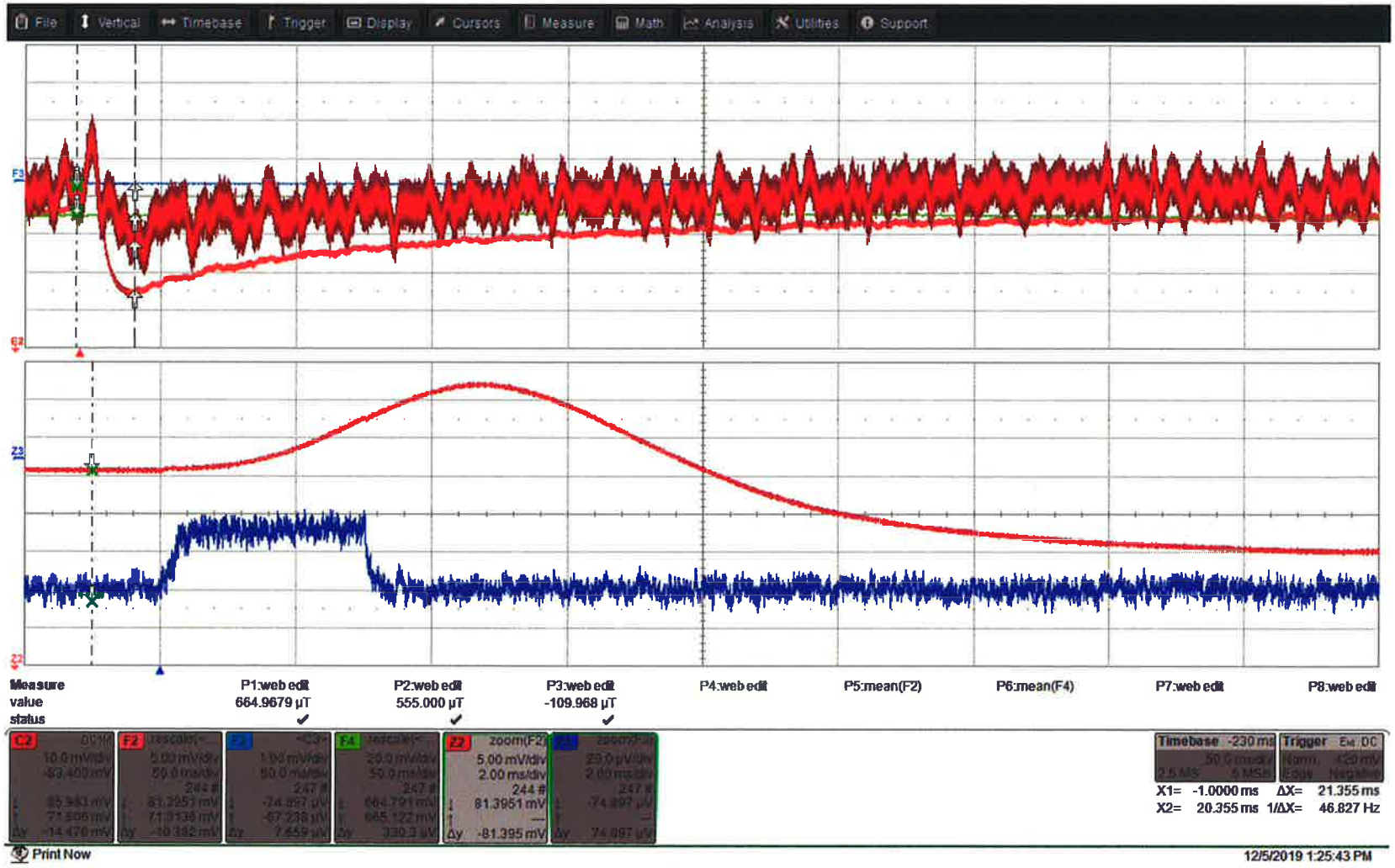
Timebase -2.00 ms
500 µs/div
1.00 MS 200 MS/s

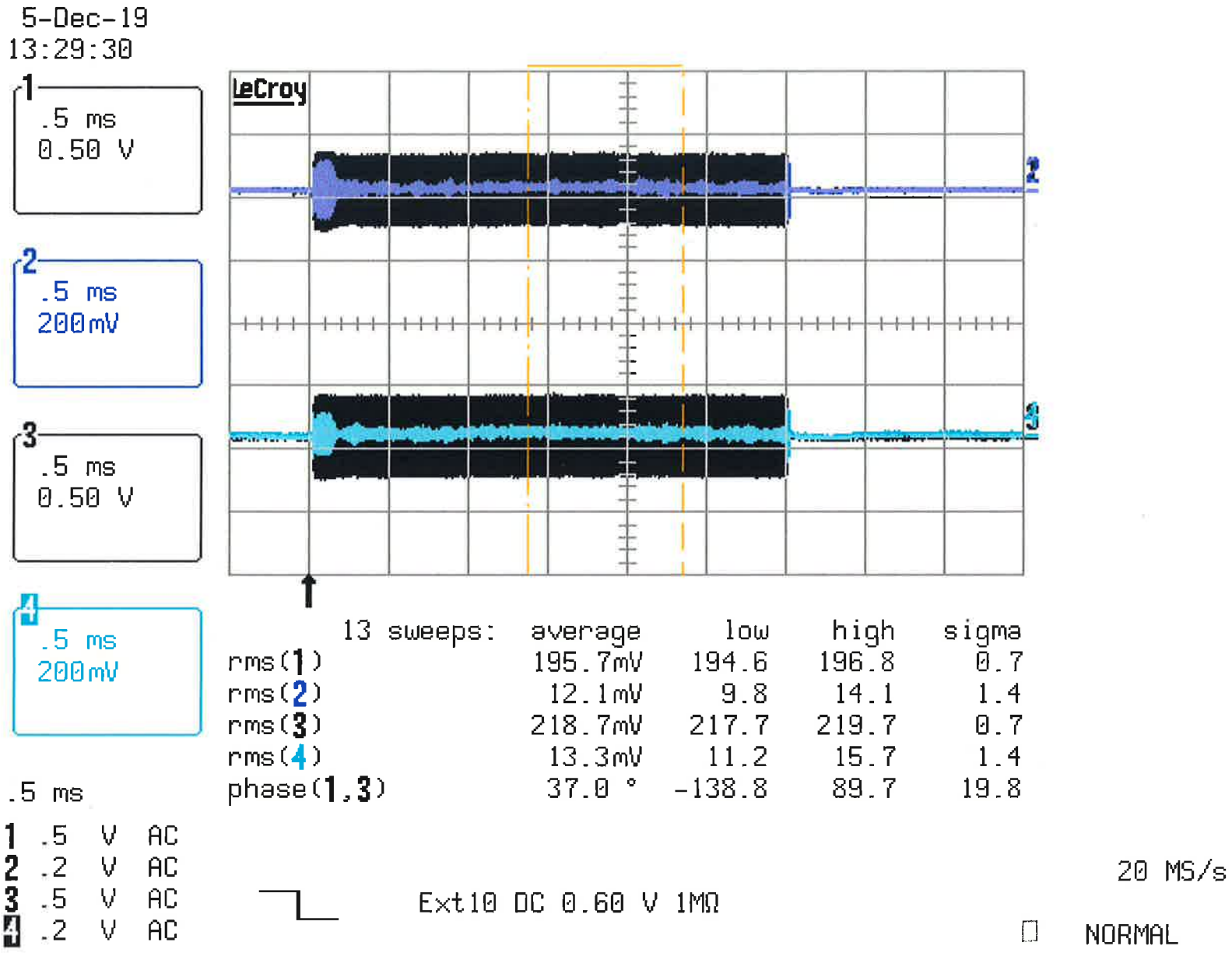
Trigger Ext/10 DC
Normal 200 mV
Edge Negative

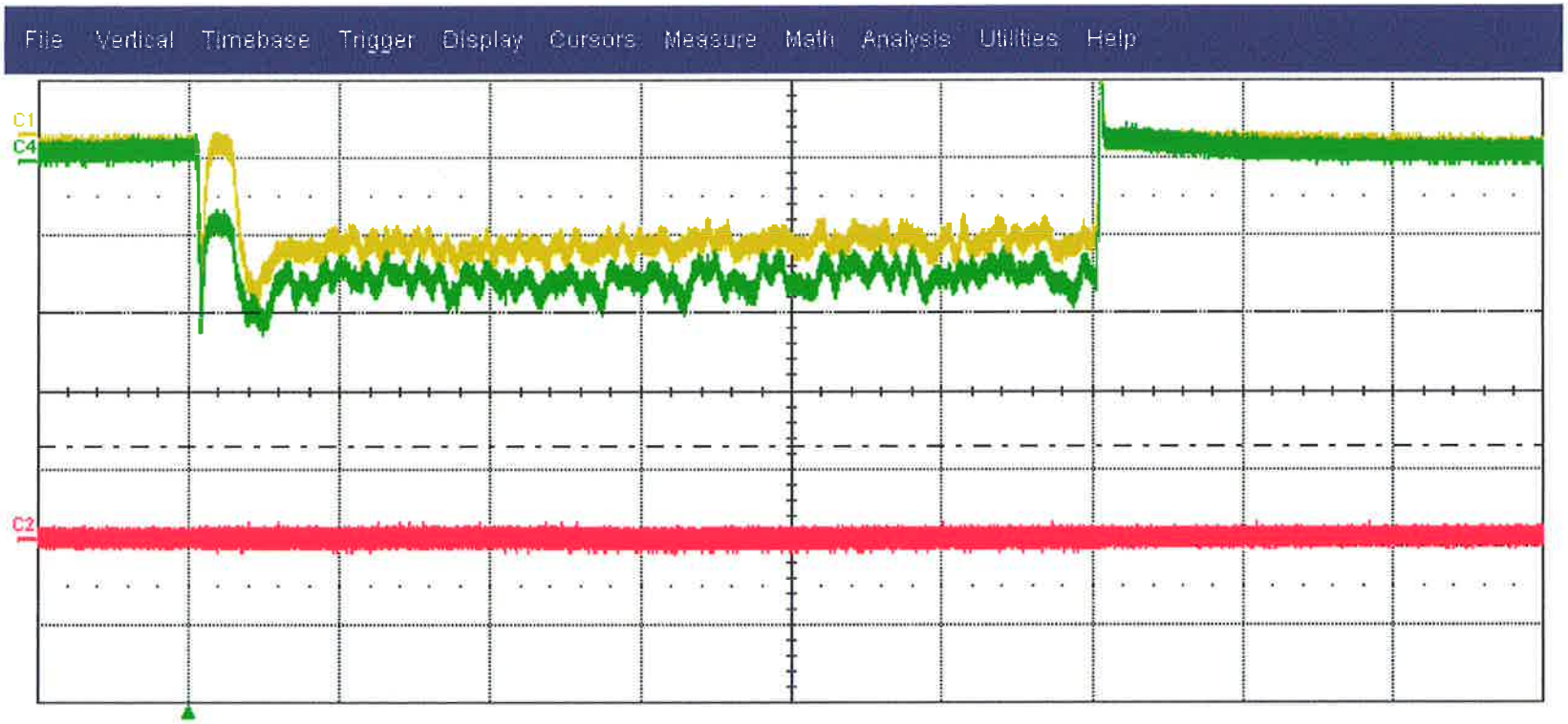
LeCroy

12/5/2019 1:21:09 PM


5-Dec-19
13:22:30
1
.5 ms
0.50 V
2
.5 ms
200mV
3
.5 ms
0.50 V
4
.5 ms
200mV
LeCroy
741 sweeps: average low high sigma
rms(1) 165.4mV 142.5 171.9 3.0
rms(2) 16.2mV 11.7 44.4 3.1
rms(3) 187.9mV 157.3 194.3 3.7
rms(4) 17.0mV 12.5 33.9 2.1
phase(1,3) 4.56 ° -200.64 161.18 16.38
.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
Support
Measure
value
status
P1:web edit
664.9679 µT
P2:web edit
555.000 µT
P3:web edit
-109.968 µT
P4:web edit
P5:mean(F2)
P6:mean(F4)
P7:web edit
P8:web edit
Timebase -230 ms
Trigger
X1= -1.0000 ms
ΔX= 21.355 ms
X2= 20.355 ms
1/ΔX= 46.827 Hz
Print Now
12/5/2019 1:25:43 PM


5-Dec-19
13:29:30
1
.5 ms
0.50 V
2
.5 ms
200mV
3
.5 ms
0.50 V
4
.5 ms
200mV
LeCroy
13 sweeps: average low high sigma
rms(1) 195.7mV 194.6 196.8 0.7
rms(2) 12.1mV 9.8 14.1 1.4
rms(3) 218.7mV 217.7 219.7 0.7
rms(4) 13.3mV 11.2 15.7 1.4
phase(1,3) 37.0 ° -138.8 89.7 19.8
.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



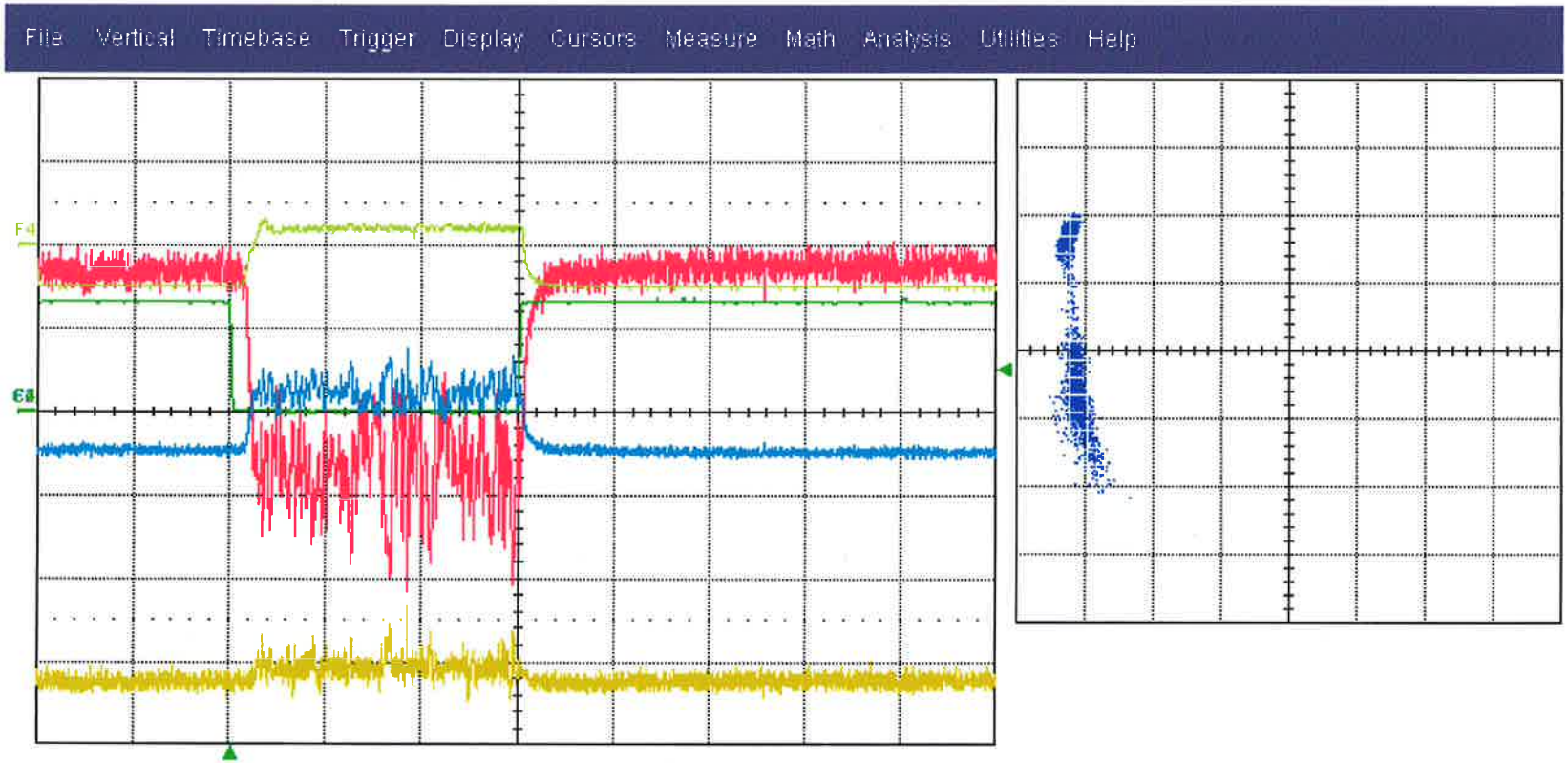
Measure	P1:mean(Z1)	P2:mean(Z4)	P3:mean(C1)	P4:mean(C4)	P5:phase(C1,C4)	P6:- - -
value	-26.80 mV	-28.53 mV	-28.00 mV	-30.44 mV	---	
mean	-26.9363 mV	-28.4232 mV	-26.9811 mV	-28.5102 mV	-15.37272244 °	
min	-33.06 mV	-38.70 mV	-31.78 mV	-34.13 mV	-177.88157562688 °	
max	-20.20 mV	-20.70 mV	-23.27 mV	-24.30 mV	178.44221490388 °	
sdev	2.3378 mV	2.7027 mV	1.5319 mV	1.8432 mV	62.5777432583689 °	
num	689	689	689	689	233	
status	✔	✔	✔	✔		

C1 DCIM	C2 DCIM	C4 DCIM
20.0 mV/div	1.00 V/div	20.0 mV/div
66.00 mV ofst	-1.890 V ofst	59.00 mV ofst
-80.0 mV	1.19 V	-73.0 mV
-46.0 mV	2.89 V	-39.0 mV
Δy 34.0 mV	Δy 1.70 V	Δy 34.0 mV

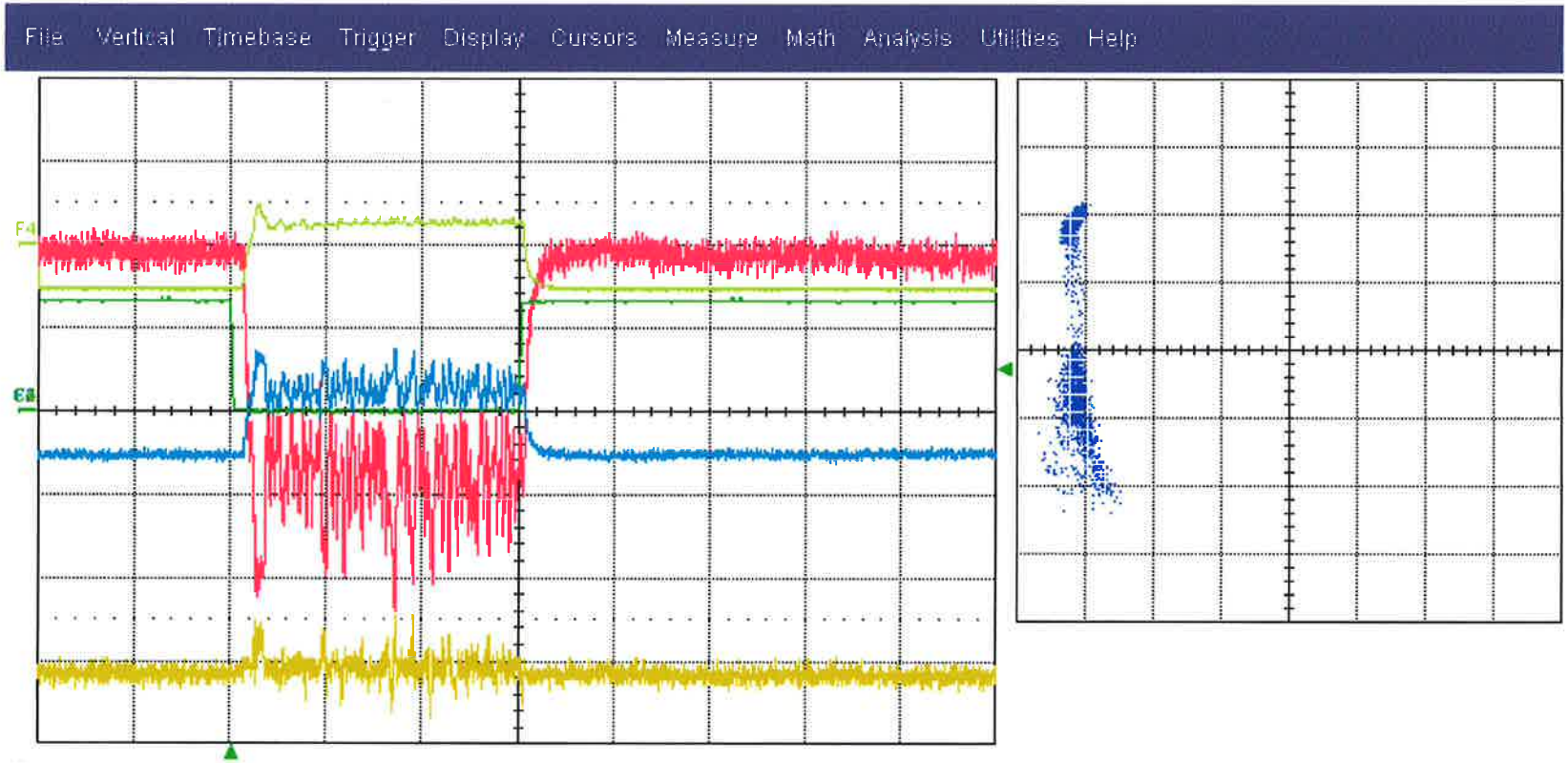
Timebase -2.00 ms	Trigger Ext/10 DC
500 µs/div	Normal 200 mV
1.00 MS 200 MS/s	Edge Negative

LeCroy

12/5/2019 1:28:14 PM



Measure	P1:pkpk(F4)	P2:pkpk(C1)	P3:mean(C2)	P4:pkpk(C2)	P5:mean(C3)	P6:mean(F4)	P7:mean(C1)	P8:mean(C4)
value	841.4e-3							
mean	841.441e-3							
min	841.4e-3							
max	841.4e-3							
sdev	---							
num	1							
status	✔							



Measure	P1:pkpk(F4)	P2:pkpk(C1)	P3:mean(C2)	P4:pkpk(C2)	P5:mean(C3)	P6:mean(F4)	P7:mean(C1)	P8:mean(C4)
value	1.0255							
mean	1.025489							
min	1.0255							
max	1.0255							
sdev	---							
num	1							
status	✔							

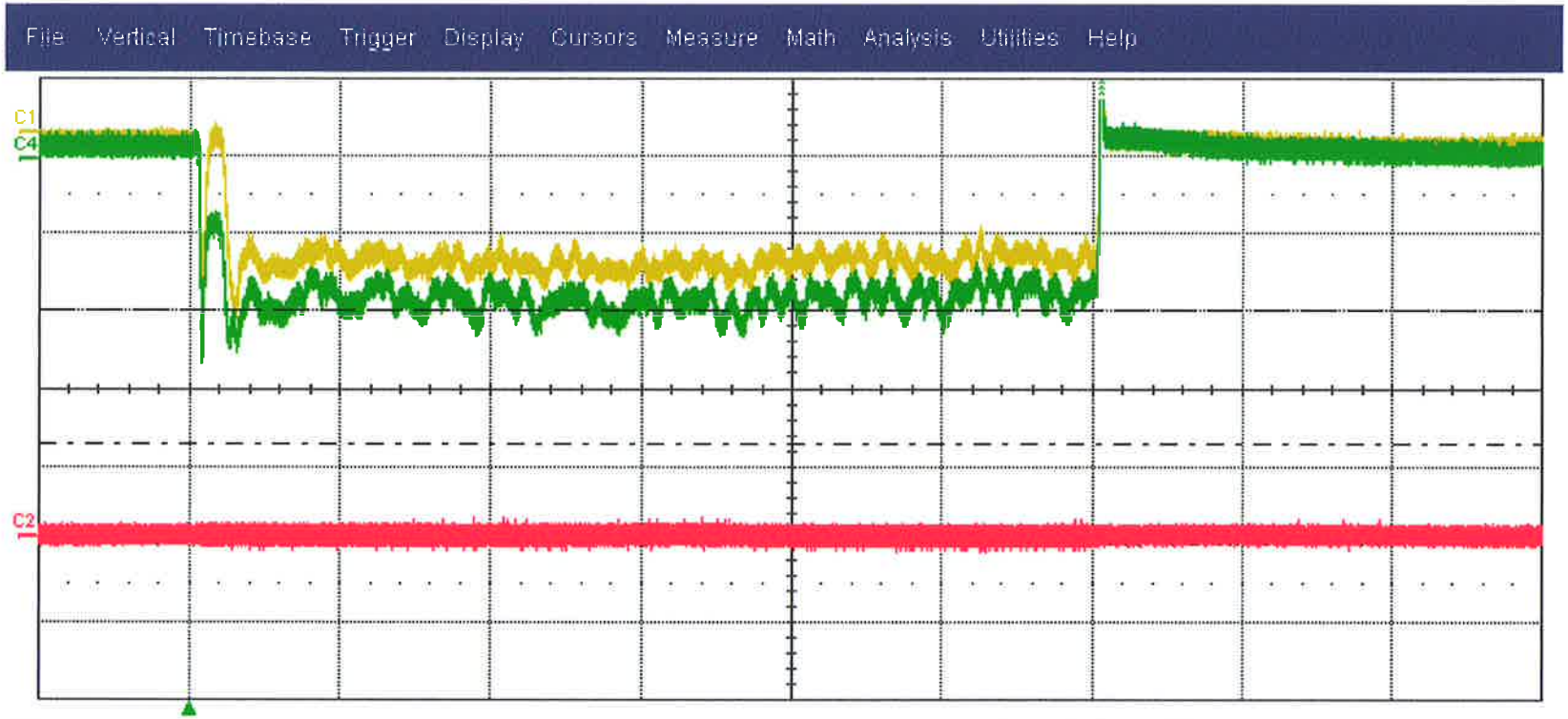
C1 D1 100 mV 0.0 mV | C2 D1 100 mV 0.0 mV | C4 F D1 2.00 V 0 mV | F3 script(... 1.00 1.0 ms | F4 <F3> 1.00 1.0 ms 48 # | XY X:C1... 100 mV 100 mV

Tbase -2.98 ms 1.00 ms/div 5.00 kS 500 kS/s

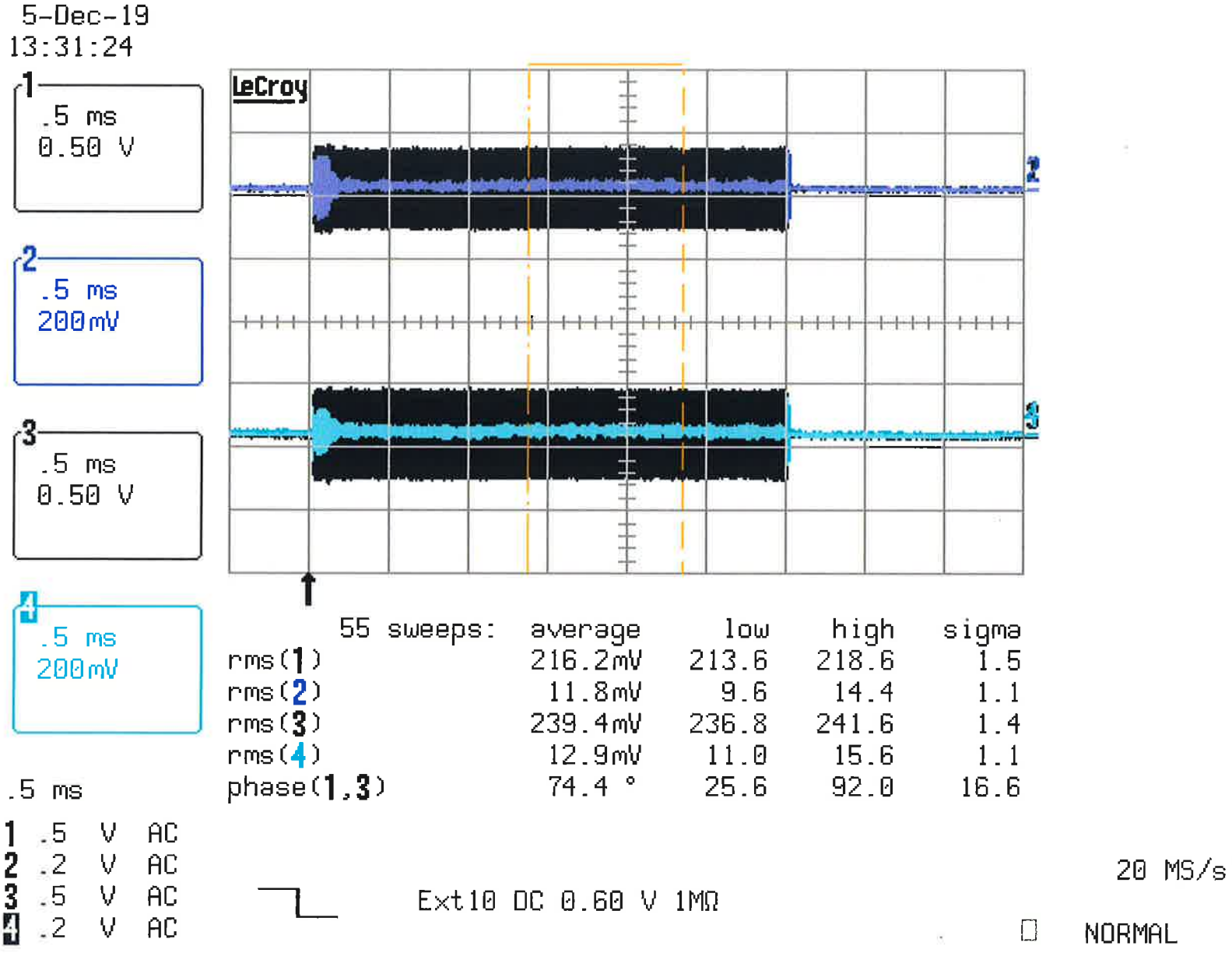
Trigger C4 DC Normal 1.00 V Edge Negative

LeCroy

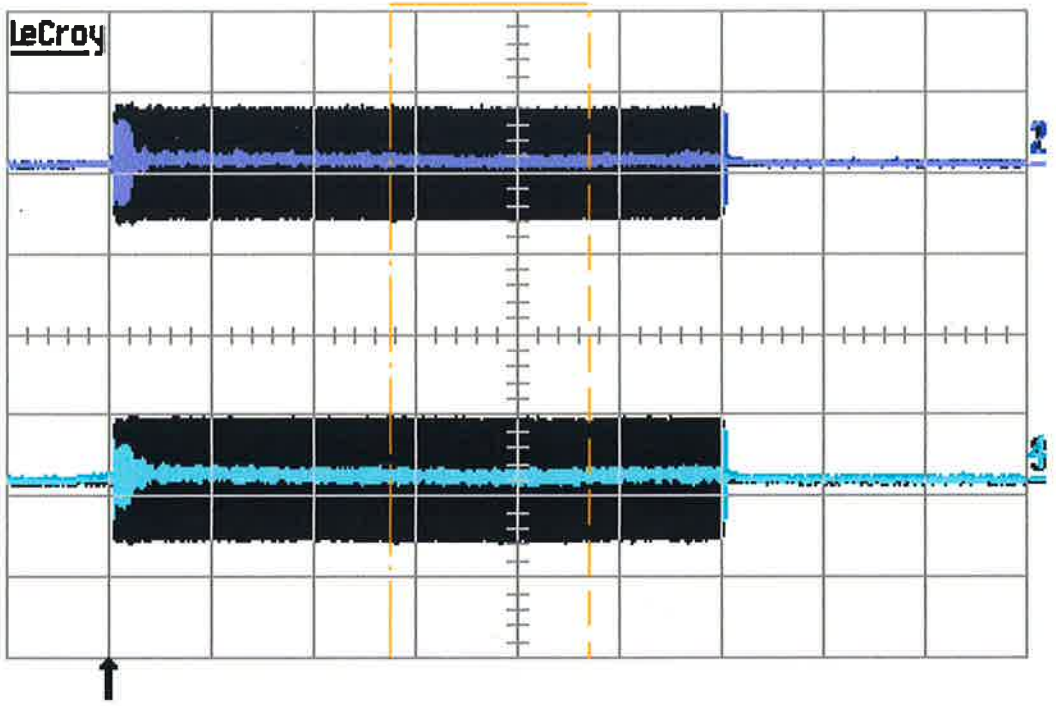
12/5/2019 1:30:01 PM



Measure	P1:mean(Z1)	P2:mean(Z4)	P3:mean(C1)	P4:mean(C4)	P5:phase(C1,C4)	P6:- - -
value	-33.38 mV	-35.96 mV	-34.55 mV	-37.14 mV	---	
mean	-27.5986 mV	-29.1932 mV	-27.6295 mV	-29.2556 mV	-15.30352659 °	
min	-36.70 mV	-39.84 mV	-35.44 mV	-38.17 mV	-177.88157562688 °	
max	-20.20 mV	-20.70 mV	-23.27 mV	-24.30 mV	178.44221490388 °	
sdev	2.8937 mV	3.3713 mV	2.3331 mV	2.7164 mV	65.0026137996578 °	
num	796	796	796	796	258	
status	✔	✔	✔	✔		


5-Dec-19
13:31:24
1
.5 ms
0.50 V
2
.5 ms
200mV
3
.5 ms
0.50 V
4
.5 ms
200mV
LeCroy
55 sweeps: average low high sigma
rms(1) 216.2mV 213.6 218.6 1.5
rms(2) 11.8mV 9.6 14.4 1.1
rms(3) 239.4mV 236.8 241.6 1.4
rms(4) 12.9mV 11.0 15.6 1.1
phase(1,3) 74.4 ° 25.6 92.0 16.6
.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-Dec-19
13:32:46



1
.5 ms
0.50 V

2
.5 ms
200mV

3
.5 ms
0.50 V

4
.5 ms
200mV

41 sweeps:	average	low	high	sigma
rms(1)	236.4mV	234.1	239.0	1.4
rms(2)	12.1mV	9.4	14.8	1.3
rms(3)	258.6mV	256.6	260.9	1.3
rms(4)	13.1mV	10.5	15.7	1.3
phase(1,3)	82 °	40	91	3

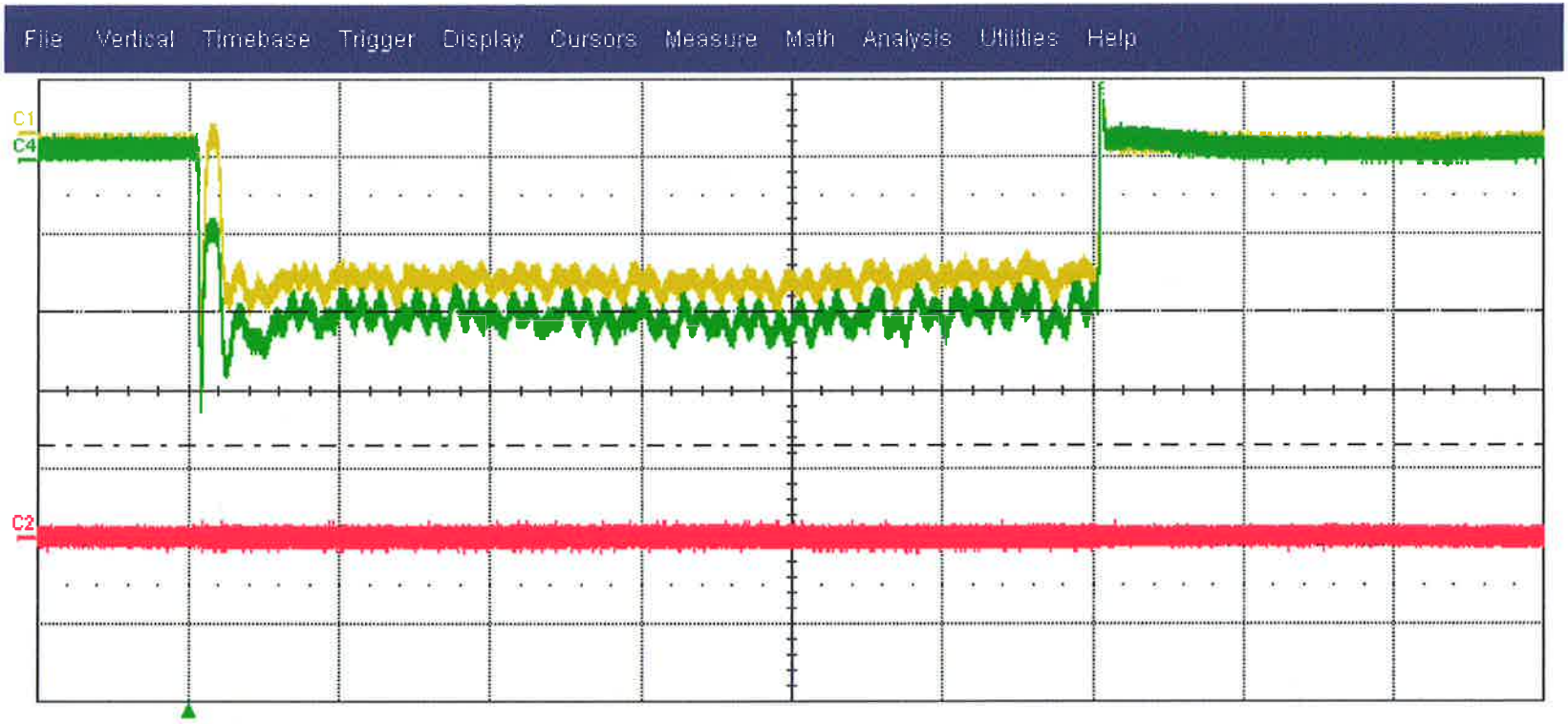
.5 ms

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



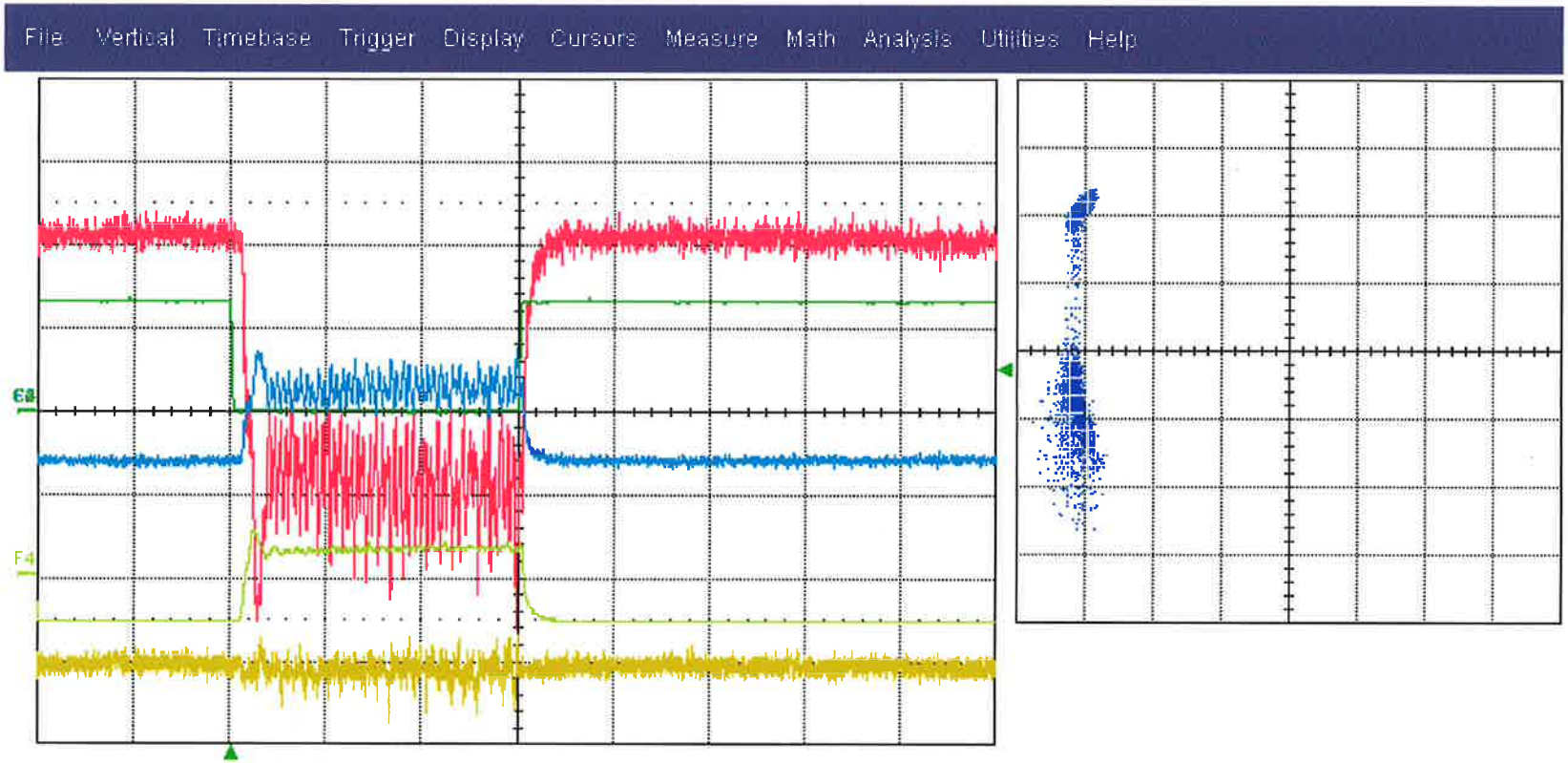
Measure	P1:mean(Z1)	P2:mean(Z4)	P3:mean(C1)	P4:mean(C4)	P5:phase(C1,C4)	P6:- - -
value	-39.71 mV	-43.12 mV	-39.11 mV	-41.57 mV	---	
mean	-28.3519 mV	-30.0046 mV	-28.3873 mV	-30.0803 mV	-13.34817859 °	
min	-41.95 mV	-43.99 mV	-39.50 mV	-42.28 mV	-177.88157562688 °	
max	-20.20 mV	-20.70 mV	-23.27 mV	-24.30 mV	178.44221490388 °	
sdev	3.6915 mV	4.1694 mV	3.2968 mV	3.6949 mV	68.5170519862381 °	
num	879	879	879	879	302	
status	✔	✔	✔	✔	▲	

C1 DCIM	C2 DCIM	C4 DCIM
20.0 mV/div	1.00 V/div	20.0 mV/div
66.00 mV ofst	-1.890 V ofst	58.00 mV ofst
---- -80.0 mV	---- 1.19 V	---- -73.0 mV
------ -46.0 mV	------ 2.69 V	------ -39.0 mV
Δy 34.0 mV	Δy 1.70 V	Δy 34.0 mV

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

LeCroy

12/5/2019 1:31:30 PM



Measure	P1:pkpk(F4)	P2:pkpk(C1)	P3:mean(C2)	P4:pkpk(C2)	P5:mean(C3)	P6:mean(F4)	P7:mean(C1)	P8:mean(C4)
value	1.1279							
mean	1.127865							
min	1.1279							
max	1.1279							
sdev	---							
num	1							
status	✔							

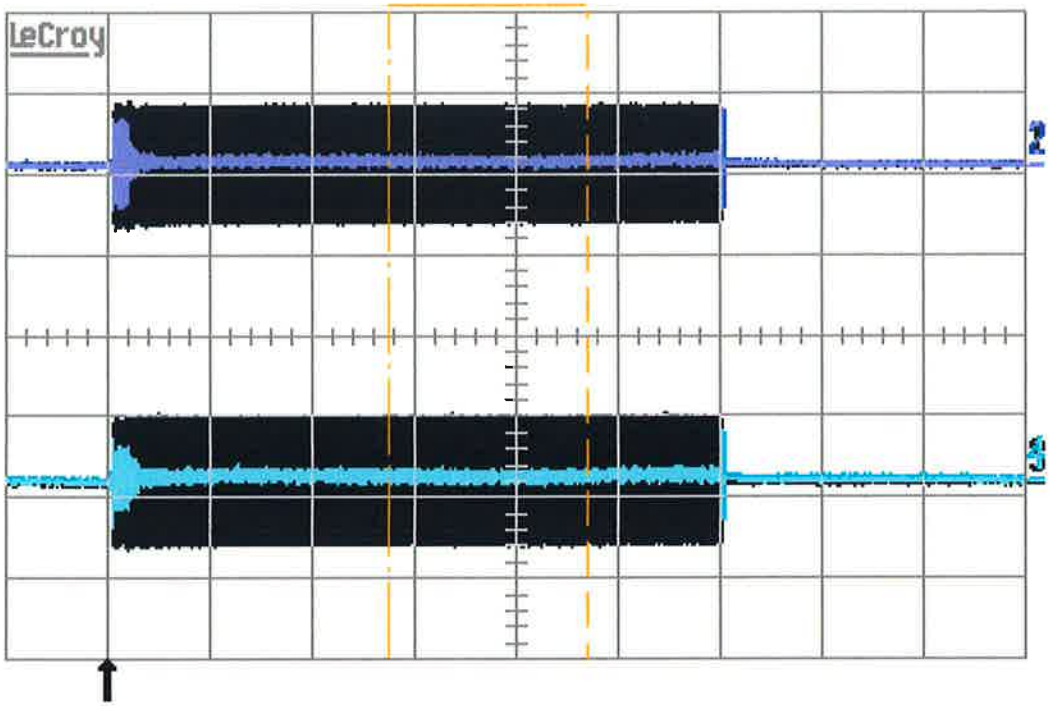
C1	C2	C4	F3 script(...	F4 <F3>	XY XC1...
100 mV	100 mV	2.00 V	1.00	1.00	100 mV
0.0 mV	0.0 mV	0 mV	1.0 ms	1.0 ms	100 mV
				46 #	

Tbase	-2.98 ms	Trigger	C4 DC
	1.00 ms/div	Normal	1.00 V
5.00 kS	500 kS/s	Edge	Negative

LeCroy

12/5/2019 1:31:34 PM

5-Dec-19
13:34:02



	43 sweeps:	average	low	high	sigma
rms(1)		253.9mV	251.3	256.6	1.3
rms(2)		12.2mV	10.2	14.9	1.2
rms(3)		276.0mV	273.6	278.7	1.3
rms(4)		13.7mV	11.7	16.4	1.2
phase(1,3)		81 °	74	90	2

1 .5 ms
0.50 V

2 .5 ms
200mV

3 .5 ms
0.50 V

4 .5 ms
200mV

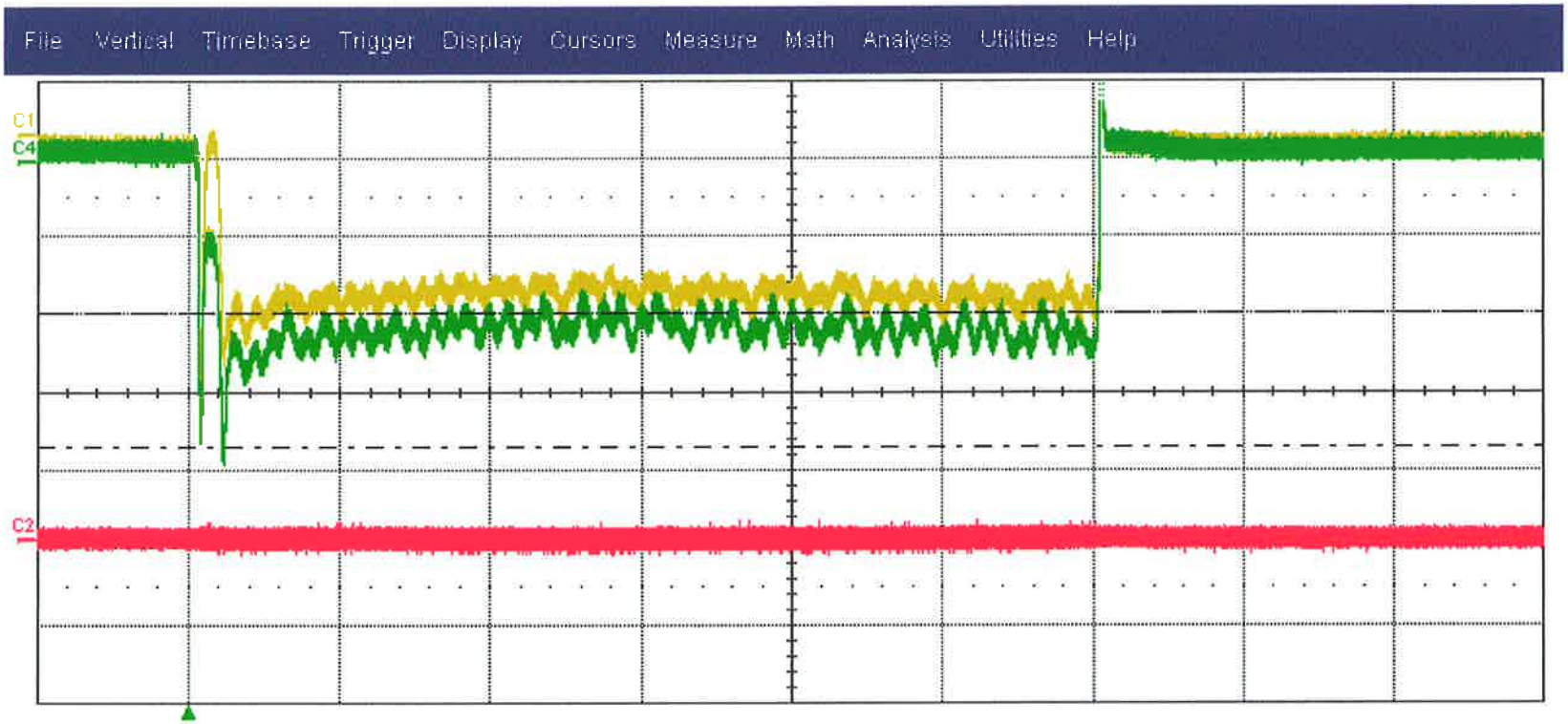
.5 ms

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



Measure	P1:mean(Z1)	P2:mean(Z4)	P3:mean(C1)	P4:mean(C4)	P5:phase(C1,C4)	P6:- - -
value	-39.80 mV	-43.17 mV	-40.14 mV	-41.41 mV	---	
mean	-29.2346 mV	-30.9004 mV	-29.2516 mV	-30.9650 mV	-8.8334643541829 °	
min	-43.35 mV	-45.61 mV	-42.99 mV	-45.40 mV	-177.88157562688 °	
max	-20.20 mV	-20.70 mV	-23.27 mV	-24.30 mV	178.44221490388 °	
sdev	4.7078 mV	5.0931 mV	4.3846 mV	4.7115 mV	70.8847819647197 °	
num	953	953	953	953	346	
status	✔	✔	✔	✔	⚠	

C1 DC1M
20.0 mV/div
66.00 mV ofst
----- -80.0 mV
----- -46.0 mV
Δy 34.0 mV

C2 DC1M
1.00 V/div
-1.890 V ofst
----- 1.19 V
----- 2.89 V
Δy 1.70 V

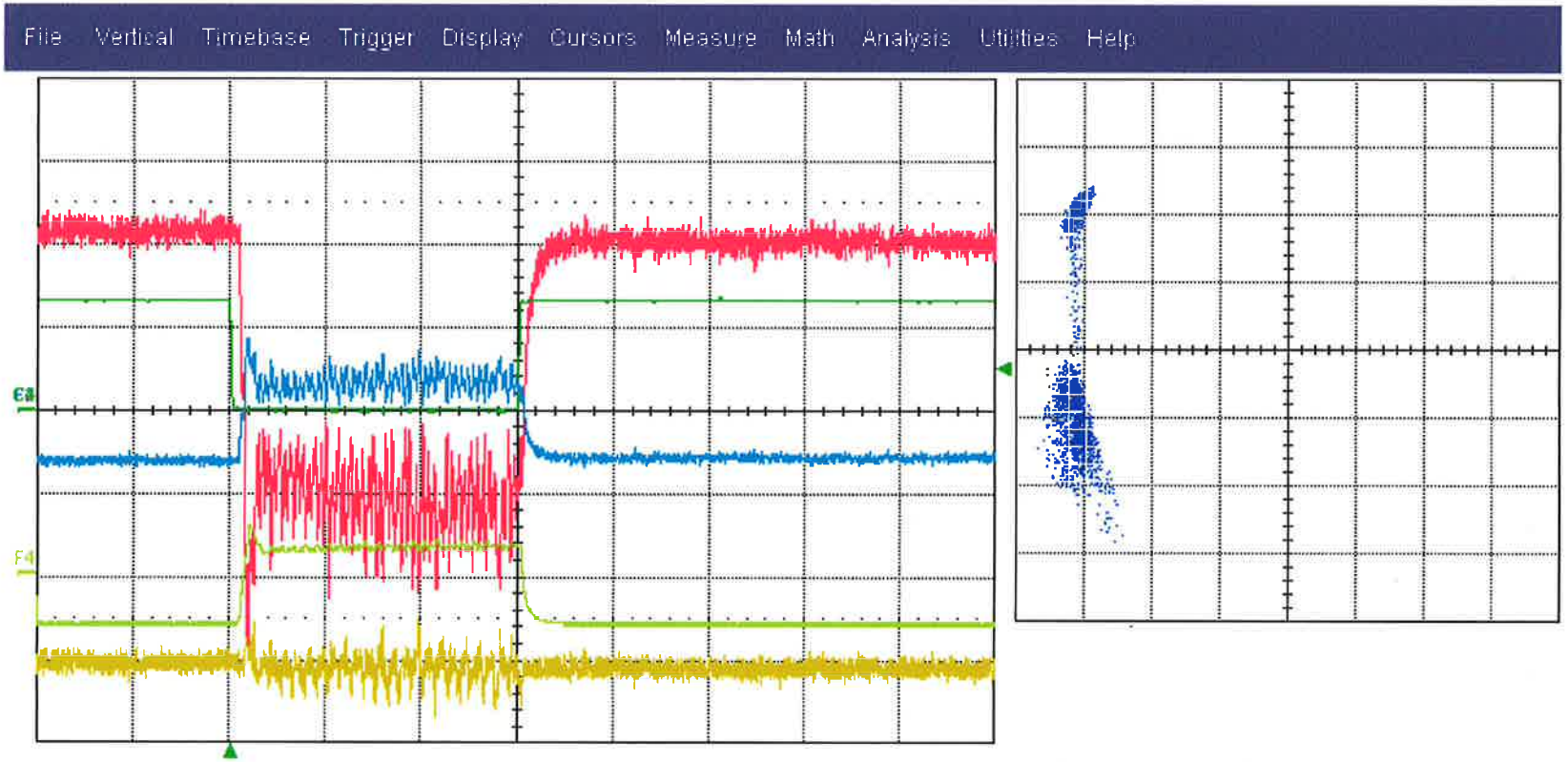
C4 DC1M
20.0 mV/div
59.00 mV ofst
----- -73.0 mV
----- -39.0 mV
Δy 34.0 mV

Timebase -2.00 ms
500 µs/div
1.00 MS 200 MS/s

Trigger Ext/10 DC
Normal 200 mV
Edge Negative

LeCroy

12/5/2019 1:32:47 PM



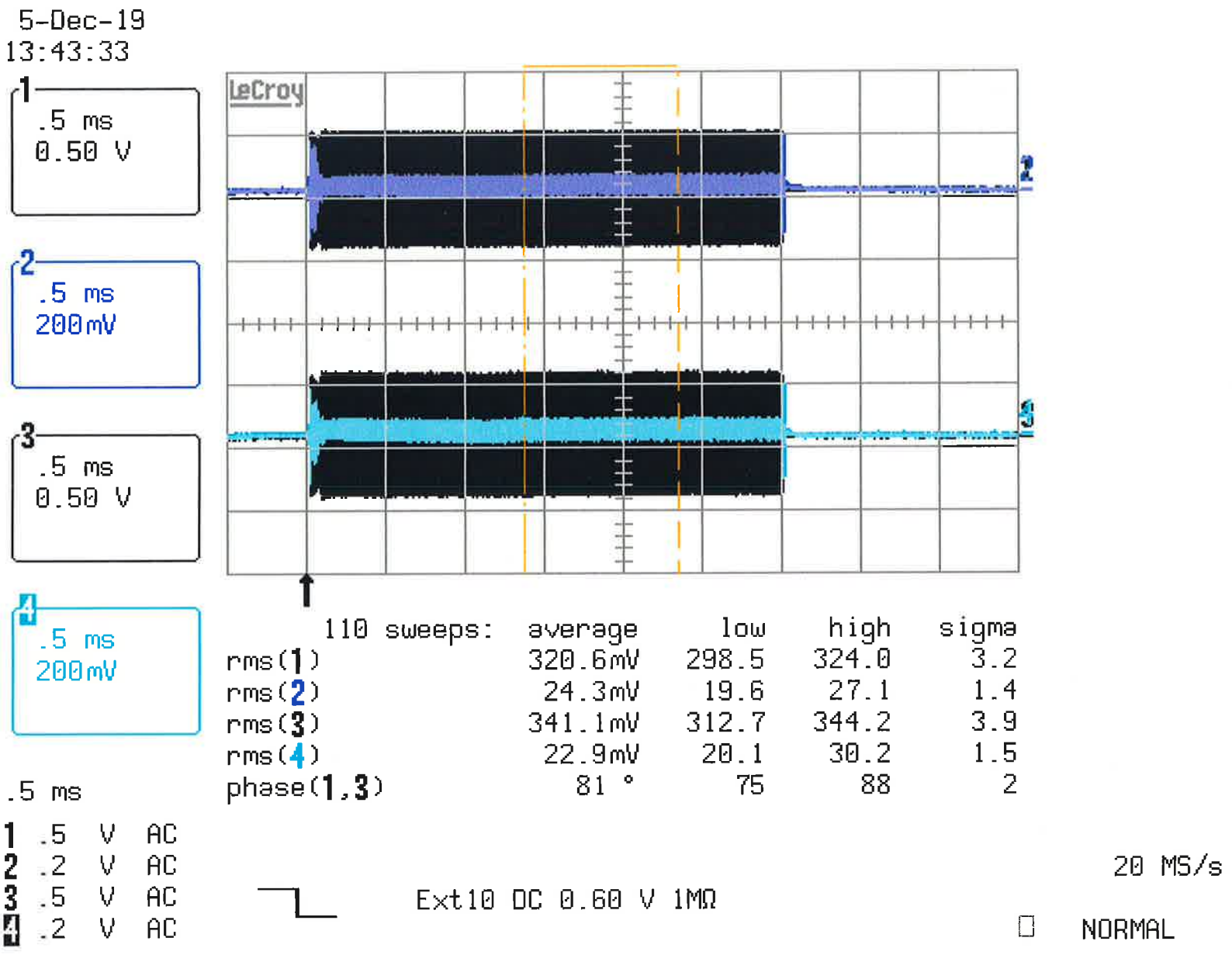
Measure	P1:pkpk(F4)	P2:pkpk(C1)	P3:mean(C2)	P4:pkpk(C2)	P5:mean(C3)	P6:mean(F4)	P7:mean(C1)	P8:mean(C4)
value	1.1963							
mean	1.196308							
min	1.1963							
max	1.1963							
sdev	---							
num	1							
status	✔							

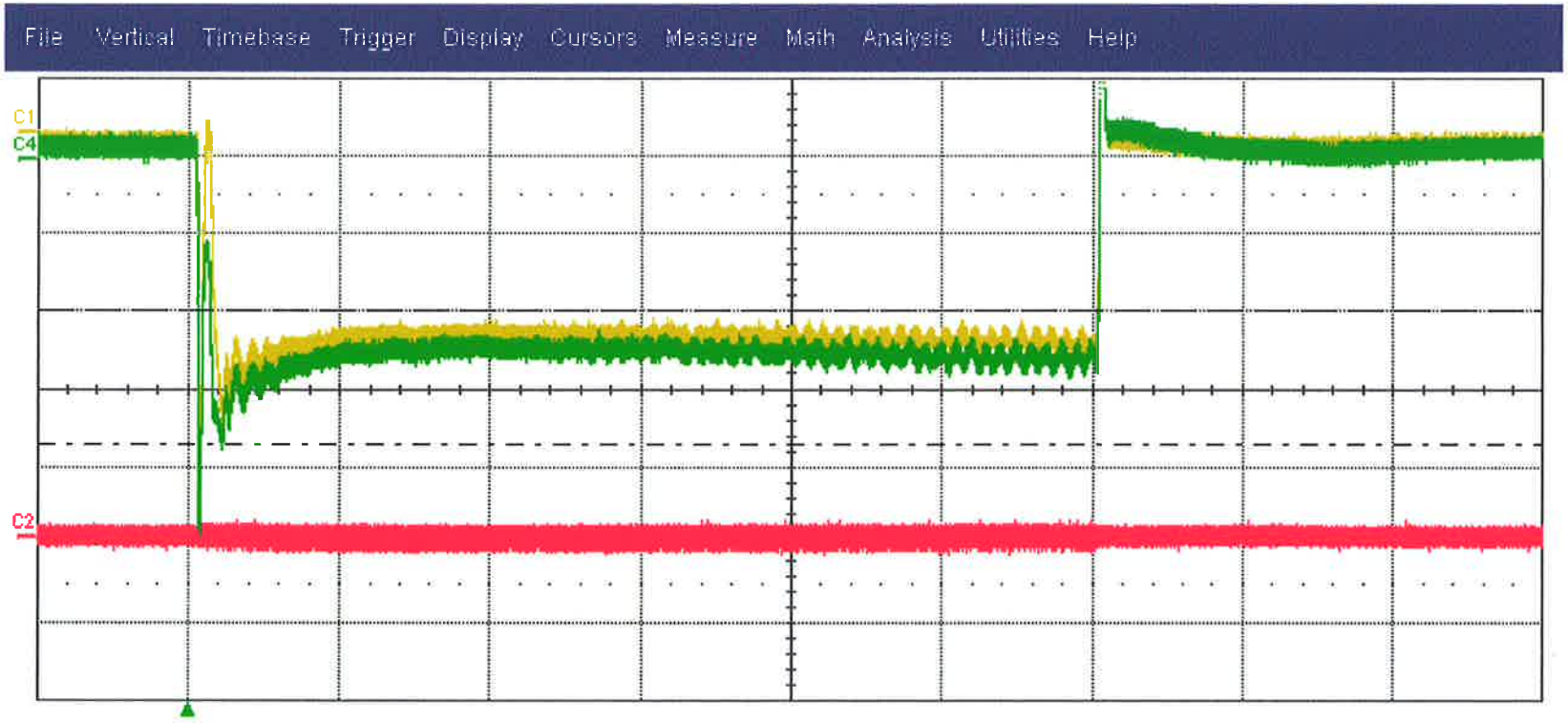
C1	C2	C4	F3 script(...	F4 <F3>	XY XC1...
100 mV	100 mV	2.00 V	1.00	1.00	100 mV
0.0 mV	0.0 mV	0 mV	1.0 ms	1.0 ms	100 mV
				47 #	

Tbase	-2.98 ms	Trigger	C4 DC
	1.00 ms/div	Normal	1.00 V
5.00 kS	500 kS/s	Edge	Negative

LeCroy

12/5/2019 1:32:49 PM


5-Dec-19
13:43:33
1
.5 ms
0.50 V
2
.5 ms
200mV
3
.5 ms
0.50 V
4
.5 ms
200mV
LeCroy
2
3
110 sweeps: average low high sigma
rms(1) 320.6mV 298.5 324.0 3.2
rms(2) 24.3mV 19.6 27.1 1.4
rms(3) 341.1mV 312.7 344.2 3.9
rms(4) 22.9mV 20.1 30.2 1.5
phase(1,3) 81 ° 75 88 2
.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



Measure	P1:mean(Z1)	P2:mean(Z4)	P3:mean(C1)	P4:mean(C4)	P5:phase(C1,C4)	P6:- - -
value	-53.15 mV	-49.60 mV	-52.85 mV	-49.21 mV	---	
mean	-53.8929 mV	-50.8232 mV	-53.9724 mV	-50.8946 mV	68.8213035327822 °	
min	-57.62 mV	-54.99 mV	-57.26 mV	-54.23 mV	68.82130353278 °	
max	-50.32 mV	-44.71 mV	-50.48 mV	-43.98 mV	68.82130353278 °	
sdev	1.5944 mV	1.8986 mV	1.5131 mV	1.7762 mV	---	
num	114	114	114	114	1	
status	✔	✔	✔	✔		

C1 DC1M
20.0 mV/div
66.00 mV ofst
-80.0 mV
-46.0 mV
Δy 34.0 mV

C2 DC1M
1.00 V/div
-1.890 V ofst
1.19 V
2.89 V
Δy 1.70 V

C4 DC1M
20.0 mV/div
59.00 mV ofst
-73.0 mV
-39.0 mV
Δy 34.0 mV

Timebase -2.00 ms
500 µs/div
1.00 MS 200 MS/s

Trigger Ext/10 DC
Normal 200 mV
Edge Negative

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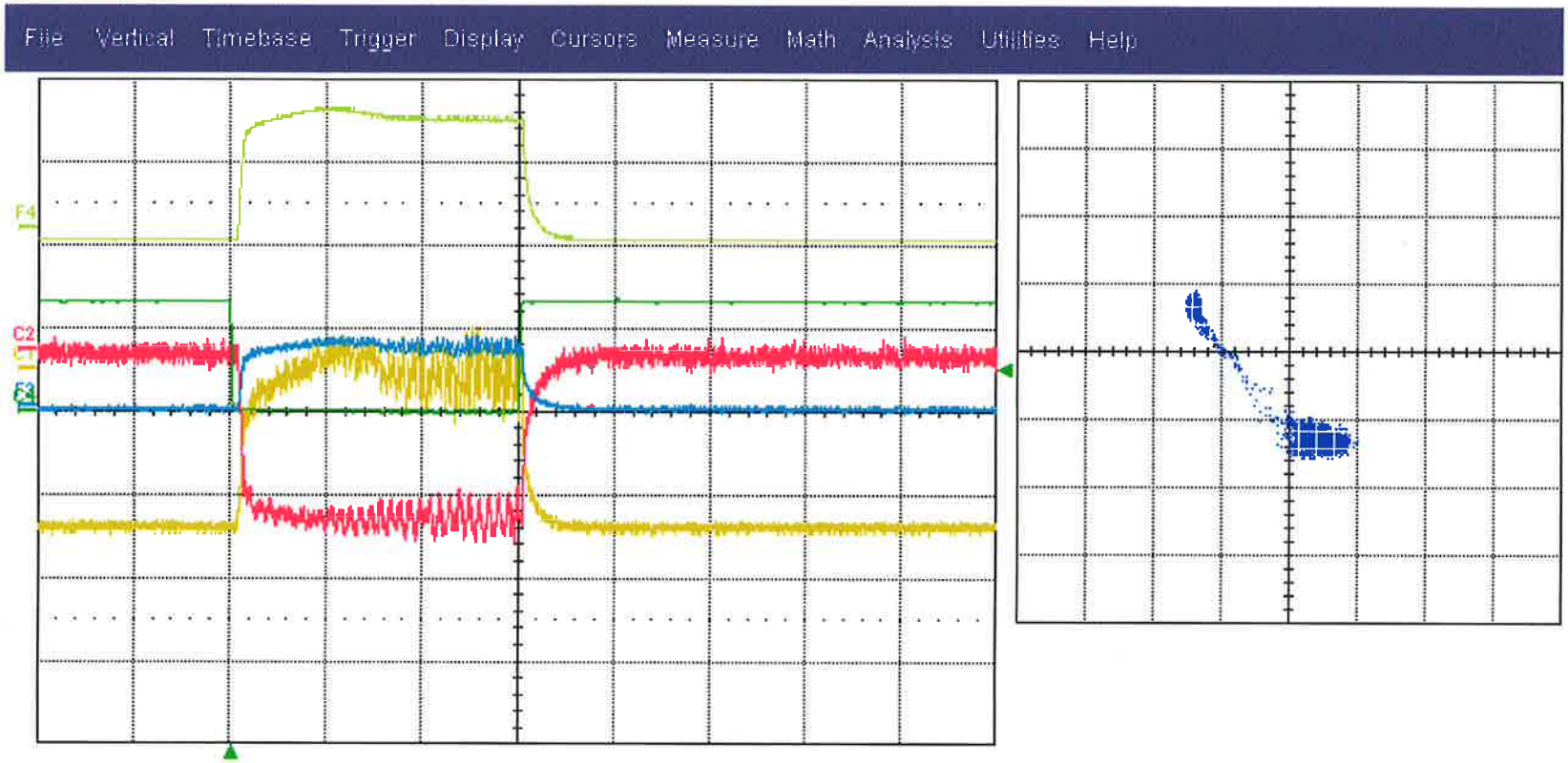
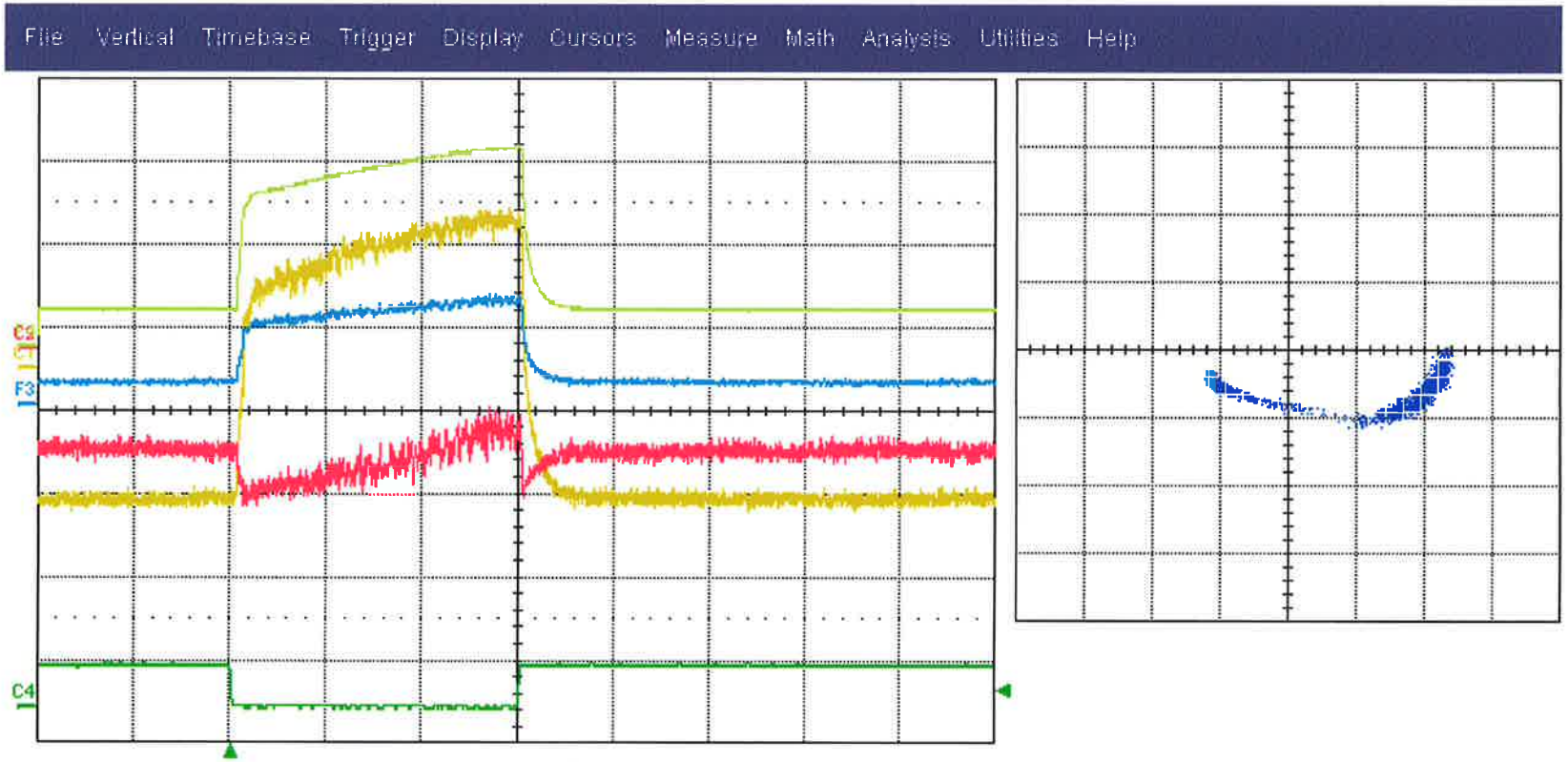
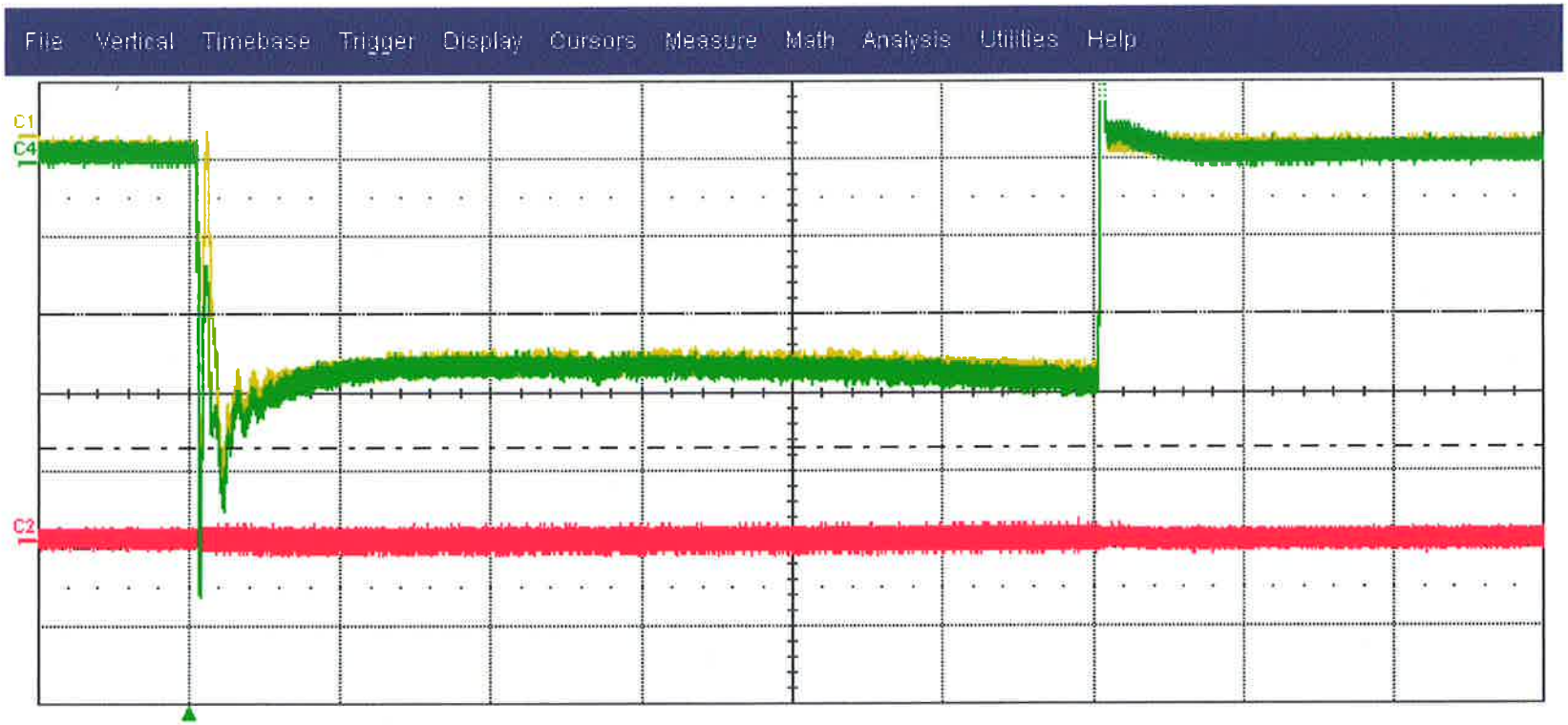
12/5/2019 1:42:17 PM



Measure	P1:pkpk(F4)	P2:pkpk(C1)	P3:mean(C2)	P4:pkpk(C2)	P5:mean(C3)	P6:mean(F4)	P7:mean(C1)	P8:mean(C4)
value	1.6009							
mean	1.600947							
min	1.6009							
max	1.6009							
sdev	---							
num	1							
status	✔							



Measure	P1:pkpk(F4)	P2:pkpk(C1)	P3:mean(C2)	P4:pkpk(C2)	P5:mean(C3)	P6:mean(F4)	P7:mean(C1)	P8:mean(C4)
value	2.2795							
mean	2.279510							
min	2.2795							
max	2.2795							
sdev	---							
num	1							
status	✔							



Measure	P1:mean(Z1)	P2:mean(Z4)	P3:mean(C1)	P4:mean(C4)	P5:phase(C1,C4)	P6:- - -
value	-58.68 mV	-52.98 mV	-58.60 mV	-52.45 mV	---	
mean	-56.9664 mV	-51.8874 mV	-57.0469 mV	-51.8941 mV	---	
min	-61.08 mV	-56.26 mV	-61.20 mV	-56.07 mV	---	
max	-52.17 mV	-47.41 mV	-52.45 mV	-48.31 mV	---	
sdev	1.9714 mV	1.9063 mV	1.9199 mV	1.8154 mV	---	
num	276	276	276	276	0	
status	✔	✔	✔	✔		

C1 DCIM
20.0 mV/div
66.00 mV ofst
---- -80.0 mV
------ -46.0 mV
Δy 34.0 mV

C2 DCIM
1.00 V/div
-1.890 V ofst
---- 1.19 V
------ 2.89 V
Δy 1.70 V

C4 DCIM
20.0 mV/div
59.00 mV ofst
---- -73.0 mV
------ -39.0 mV
Δy 34.0 mV

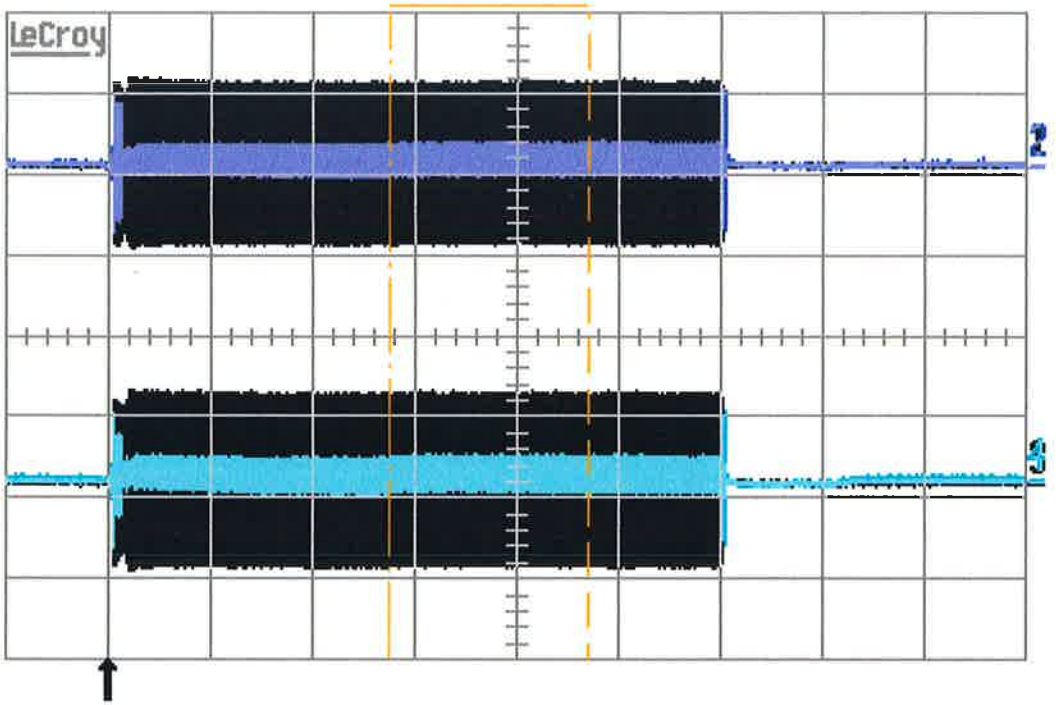
Timebase -2.00 ms
500 µs/div
1.00 MS 200 MS/s

Trigger Ext/10 DC
Normal 200 mV
Edge Negative

LeCroy

12/5/2019 1:47:22 PM

5-Dec-19
13:48:43



1
.5 ms
0.50 V

2
.5 ms
200mV

3
.5 ms
0.50 V

4
.5 ms
200mV

267 sweeps:	average	low	high	sigma
rms(1)	346.5mV	333.9	358.3	8.1
rms(2)	28.9mV	25.1	32.3	1.7
rms(3)	365.5mV	353.5	376.7	7.8
rms(4)	28.5mV	24.1	32.4	1.9
phase(1,3)	80 °	74	88	2

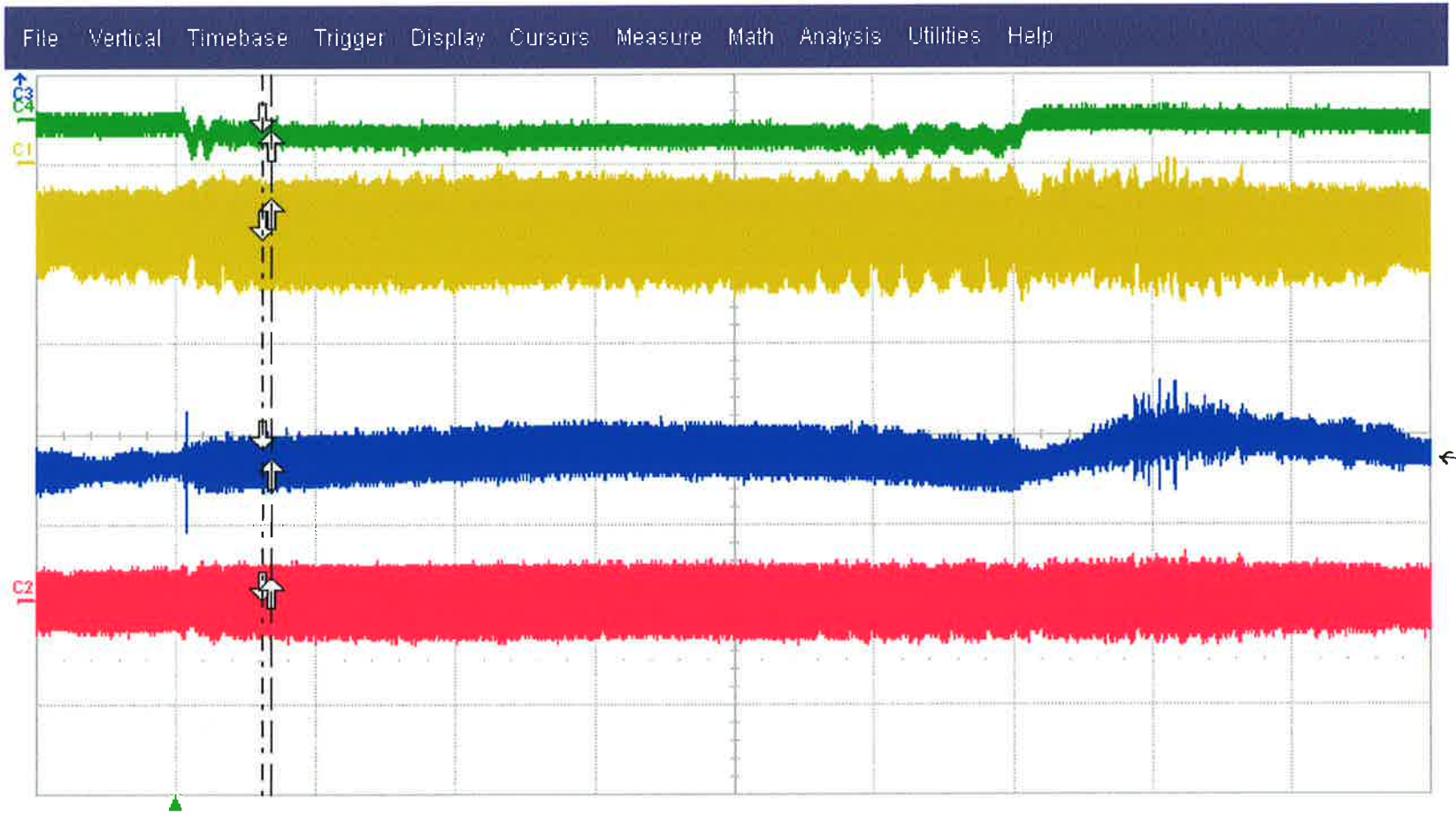
.5 ms

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
C3
C4
C1
C2
SEC
photodiode
into IMSL
Measure
P1:mean(C1)
-386 mV
P2:pkpk(C2)
969 mV
P3:pkpk(C3)
13.4 mV
P4:mean(C3)
-251.50 mV
P5:mean(C4)
-19.6 V
P6:- - -
value
status
C1 DC1M
500 mV/div
1.510 V offset
-419 mV
-211 mV
Δy 208 mV
C2 DC1M
1.00 V/div
-1.840 V ofst
24 mV
248 mV
Δy 224 mV
C3 DC1M
10.0 mV/div
249.00 mV
-250.57 mV
Δy -1.22 mV
C4 DC1M
100 V/div
350.0 V offset
-12.6 V
-15.6 V
Δy -3.1 V
Timebase -2.00 ms
500 µs/div
1.00 MS 200 MS/s
Trigger Ext/10 DC
Normal 200 mV
Edge Positive
X1= 314.260 µs ΔX= 29.060 µs
X2= 343.320 µs 1/ΔX= 34.412 kHz
LeCroy
12/5/2019 1:43:59 PM