Parameters for gain and offset measurement:

- 8.5 mV per Calibration DAC count.
- 10.5 mV per Threshold DAC count.
- Charge injection capictor = 56 fF.
- n-side Cal DAC: 2, 3, 4.
- p-side Cal DAC: 61, 60, 59.

h1-13 (backward HDI), t=100 ns, Unbonded

Chip	Gain (counts/counts)	Gain (mV/fC)	Offset (counts)	Offset (mV)	Offset RMS (counts)	Offset RMS (mV)
0	-9.05	200.	62.6	43.2	1.26	13.5
1	-9.24	204.	63.7	31.7	1.50	13.8
2	-9.53	210.	61.4	55.6	1.22	13.5
3	-9.18	203.	61.6	53.1	1.24	12.6
4	-8.93	197.	63.9	29.2	1.10	11.4
5	-9.33	206.	61.5	54.8	1.13	11.2
6	-9.42	208.	58.2	89.2	1.32	13.6
7	-9.19	203.	50.0	11.4	1.31	13.3
8	-9.19	203.	47.4	37.1	1.36	13.6
9	-8.71	192.	48.3	37.7	0.80	9.3
10	-9.50	210.	50.1	3.7	1.41	14.1
11	-9.53	210.	52.1	-17.1	1.39	15.3
12	-9.76	215.	47.5	27.1	1.43	15.9
13	-9.51	210.	46.8	38.3	1.18	12.8

h1-13 (backward HDI), t=100 ns, Bonded

Chip	Gain (counts/counts)	Gain (mV/fC)	Offset (counts)	Offset (mV)	Offset RMS (counts)	Offset RMS (mV)
0	-8.18	180.	62.7	41.6	1.69	17.3
1	0.00	0.	0.0	0.0	0.00	0.0
2	-9.03	199.	61.7	52.0	1.52	14.7
3	0.00	0.	0.0	0.0	0.00	0.0
4	-8.30	183.	63.9	29.6	1.23	12.4
5	-8.75	193.	61.9	50.0	1.48	15.5
6	-8.79	194.	60.8	64.0	1.60	19.1
7	-8.66	191.	50.9	10.1	1.60	18.8
8	-8.69	192.	48.3	38.0	1.44	13.8
9	-8.21	181.	49.2	35.8	1.10	15.8
10	-9.00	199.	50.7	6.7	1.53	16.0
11	-8.98	198.	52.9	-14.8	1.29	16.0
12	-9.20	203.	47.9	33.5	1.53	16.7
13	-9.03	199.	47.0	46.0	1.49	17.7

h1-13 (backward HDI), t=400 ns, Unbonded

Chip	Gain		Offset		Offset RMS	
	(counts/counts)	(mV/fC)	(counts)	(mV)	(counts)	(mV)
0	-9.23	204.	62.4	44.8	1.29	13.5
1	-9.54	210.	63.8	30.1	1.28	13.6
2	-9.72	214.	61.5	54.8	1.26	13.1
3	-9.43	208.	61.6	53.0	1.24	12.1
4	-9.13	201.	64.2	26.0	1.05	10.7
5	-9.56	211.	61.6	52.6	1.24	13.1
6	-9.58	211.	57.3	98.8	1.35	13.4
7	-9.17	202.	49.0	21.4	1.17	11.7
8	-9.24	204.	46.4	47.5	1.33	13.9
9	-8.52	188.	46.7	57.3	1.24	19.4
10	-9.62	212.	49.0	13.8	1.09	12.0
11	-9.39	207.	50.2	6.2	1.08	11.8
12	-9.77	216.	45.7	47.5	1.26	15.0
13	-9.46	209.	45.1	57.6	1.22	12.2

h1-13 (backward HDI), t=400 ns, Bonded

Chip	Gain		Offset		Offset RMS	
	(counts/counts)	(mV/fC)	(counts)	(mV)	(counts)	(mV)
0	-8.87	196.	62.5	43.0	1.60	17.0
1	0.00	0.	0.0	0.0	0.00	0.0
2	-9.48	209.	60.9	59.7	1.51	14.9
3	0.00	0.	0.0	0.0	0.00	0.0
4	-8.86	195.	63.5	33.6	1.10	11.7
5	-9.33	206.	61.4	54.3	1.30	12.7
6	-9.26	204.	59.4	76.4	1.61	16.7
7	-8.86	195.	49.5	21.5	1.23	13.5
8	-8.86	195.	46.5	53.5	1.20	13.2
9	-6.51	144.	41.2	147.5	0.77	16.9
10	-9.25	204.	48.9	20.2	1.31	15.0
11	-8.08	178.	47.2	59.0	1.64	15.4
12	-9.34	206.	45.6	54.2	1.41	16.8
13	-9.07	200.	44.9	65.7	1.31	14.8

h1-29 (forward HDI), t=100 ns, Unbonded

Chip	Gain (counts/counts)	Gain (mV/fC)	Offset (counts)	Offset (mV)	Offset RMS (counts)	Offset RMS (mV)
0	-8.73	193.	61.7	51.6	1.10	11.9
1	-8.63	190.	68.6	-20.6	1.27	12.7
2	-9.13	201.	62.5	44.3	1.31	12.8
3	-9.14	202.	58.4	88.6	1.54	15.1
4	-9.07	200.	63.7	30.9	1.25	12.2
5	-9.37	207.	63.8	29.5	1.34	14.3
6	-9.79	216.	63.4	35.5	1.54	15.8
7	-9.44	208.	51.2	-6.1	1.38	14.6
8	-9.72	214.	49.8	3.3	1.28	13.0
9	-6.11	135.	43.7	131.3	1.38	20.7
10	0.00	0.	0.0	0.0	0.00	0.0
11	-9.89	218.	51.7	-18.5	1.53	14.4
12	-8.73	193.	52.0	-2.7	1.42	13.9
13	0.00	0.	0.0	0.0	0.00	0.0

h1-29 (forward HDI), t=100 ns, Bonded

Chip	Gain (counts/counts)	Gain (mV/fC)	Offset (counts)	Offset (mV)	Offset RMS (counts)	Offset RMS (mV)
0	-7.73	170.	62.3	47.2	1.21	13.1
1	-7.05	155.	64.7	20.6	1.49	17.4
2	-8.23	182.	61.5	54.9	1.53	15.8
3	-8.23	182.	57.5	96.7	1.75	19.2
4	-8.14	180.	62.3	46.3	1.21	12.1
5	-8.45	186.	62.1	47.5	1.63	17.6
6	-8.79	194.	62.6	41.5	1.90	21.1
7	-8.82	195.	52.3	-6.1	1.92	19.4
8	-9.66	213.	50.8	-4.3	1.60	17.6
9	-7.68	169.	52.3	12.4	1.22	14.4
10	0.00	0.	0.0	0.0	0.00	0.0
11	-9.50	210.	50.6	-1.3	1.32	14.3
12	-8.22	181.	50.8	18.8	1.33	13.8
13	0.00	0.	0.0	0.0	0.00	0.0

h1-29 (forward HDI), t=400 ns, Unbonded

Chip	Gain		Offset		Offset RMS	
	(counts/counts)	(mV/fC)	(counts)	(mV)	(counts)	(mV)
0	-8.73	193.	61.4	56.4	1.19	12.3
1	-9.00	199.	69.2	-26.7	1.20	12.0
2	-9.33	206.	62.4	45.6	1.22	12.6
3	-9.13	201.	57.8	92.5	1.41	15.0
4	-9.27	204.	63.3	34.9	1.26	13.1
5	-9.73	215.	63.9	29.5	1.33	13.5
6	-9.92	219.	63.1	37.7	1.44	16.1
7	-9.37	207.	49.0	17.3	1.34	13.6
8	-9.47	209.	47.0	36.3	1.35	14.1
9	-5.42	120.	42.3	159.5	1.96	25.9
10	0.00	0.	0.0	0.0	0.00	0.0
11	-9.85	217.	49.4	4.9	1.13	12.3
12	-8.87	196.	50.6	10.4	1.27	13.3
13	0.00	0.	0.0	0.0	0.00	0.0

h1-29 (forward HDI), t=400 ns, Bonded

Chip	Gain		Offset		Offset RMS	
	(counts/counts)	(mV/fC)	(counts)	(mV)	(counts)	(mV)
0	-8.05	178.	61.3	56.2	1.34	13.2
1	-8.23	181.	67.3	-6.9	1.37	13.5
2	-8.70	192.	60.8	61.8	1.51	16.7
3	-8.48	187.	55.9	112.3	1.66	16.7
4	-8.71	192.	62.0	50.0	1.42	14.2
5	-9.03	199.	61.9	49.9	1.67	18.6
6	-9.22	203.	62.5	42.4	1.68	19.6
7	-8.86	195.	49.5	21.1	1.35	13.6
8	-9.85	217.	48.4	16.3	1.28	13.9
9	-7.76	171.	50.8	27.5	1.13	12.8
10	0.00	0.	0.0	0.0	0.00	0.0
11	-9.59	212.	48.5	20.8	1.12	10.9
12	-8.45	186.	49.4	31.3	1.20	11.6
13	0.00	0.	0.0	0.0	0.00	0.0

Average Gain Summary

HDI	n-side				p-side			
	Unbonded		Bonded		Unbonded		Bonded	
	100 ns	400 ns	100 ns	400 ns	100 ns	400 ns	100 ns	400 ns
h1-13 (c/c)	-9.24	-9.46	-8.61	-9.16	-9.34	-9.31	-8.82	-8.57
h1-29 (c/c)	-9.12	-9.30	-8.09	-8.63	-8.78	-8.59	-8.78	-8.90
h1-13 (mV/fC)	204	209	190	202	206	205	195	189
h1-29 (mV/fC)	201	205	178	190	194	190	194	196

Average Offset Dispersion Summary

HDI	n-side				p-side			
	Unbonded		Bonded		Unbonded		Bonded	
	100 ns	400 ns	100 ns	400 ns	100 ns	400 ns	100 ns	400 ns
h1-13 (c)	1.25	1.24	1.50	1.42	1.27	1.20	1.43	1.27
h1-29 (c)	1.34	1.29	1.53	1.52	1.40	1.41	1.48	1.22
h1-13 (mV)	12.8	12.8	15.8	14.6	13.5	13.7	16.4	15.1
h1-29 (mV)	13.5	13.5	16.6	16.1	15.3	15.8	15.9	12.5