DAC Functional Test Report

Board ID: TEST
Performed: 2016-06-22 17:09

| Status	Test	Results
FAIL	SCK Rails	LV Gain: 0.993127. UV Gain: 0.877379. 44/50 points within tolera
FAIL	CCD Bias OG Voltage	LV Gain: 0.998906. UV Gain: 0.897753. 45/50 points within tolera
PASS	CCD Bias OD Voltage	Gain: 0.991752. 21/21 points within tolerance.
PASS	CCD Bias GR Voltage	Gain: 0.997631. 30/31 points within tolerance.
PASS	CCD Bias RD Voltage	Gain: 0.997109. 30/31 points within tolerance.
PASS		Gain: 0.998728. 30/31 points within tolerance.

CSGate Test
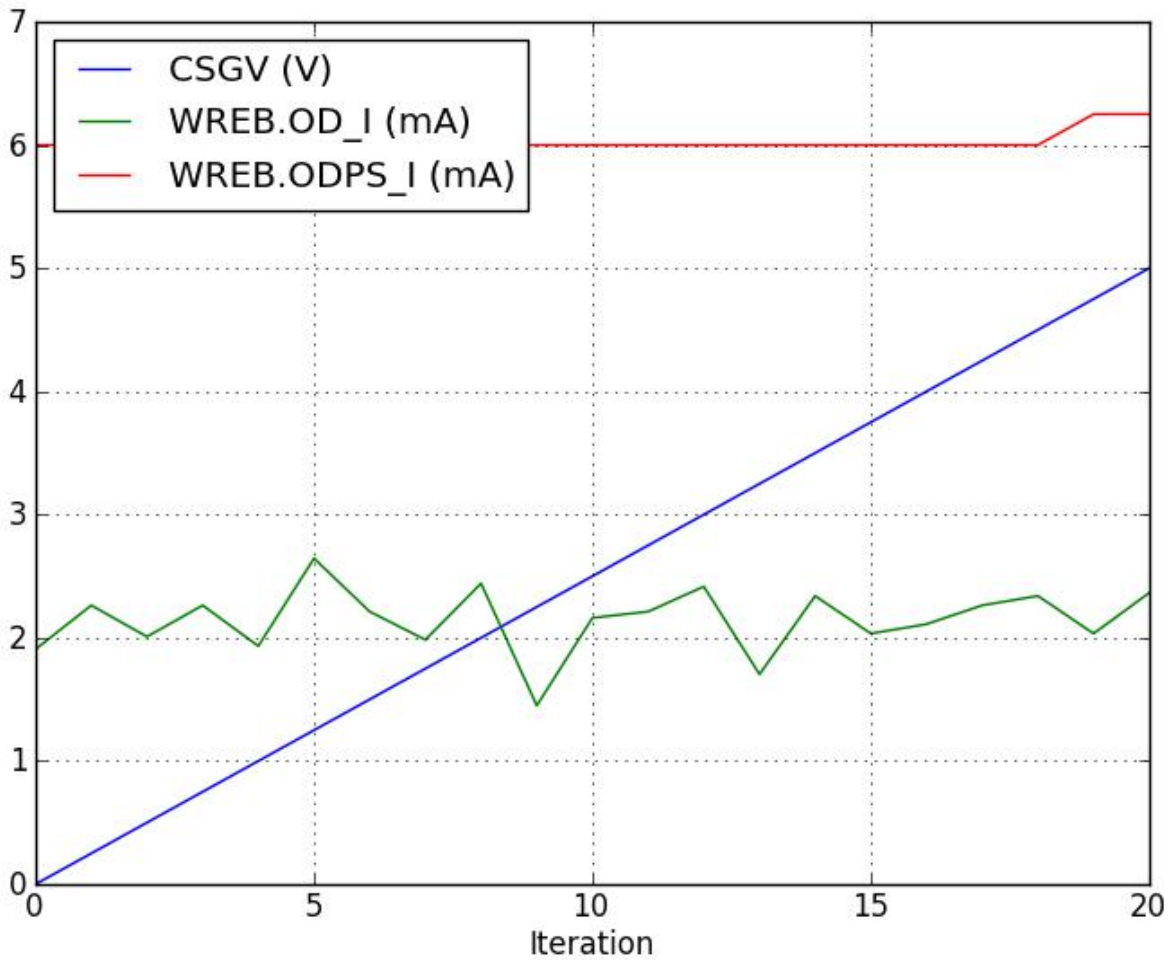
CSGV (V)	WREB.OD_I (mA)	WREB.ODPS_I (mA)
0	1.9073	6.0
0.25	2.2634	6.0
0.5	2.0091	6.0
0.75	2.2634	6.0
1.0	1.9328	6.0
1.25	2.6449	6.0
1.5	2.2125	6.0
1.75	1.9836	6.0
2.0	2.4414	6.0
2.25	1.4496	6.0
2.5	2.1617	6.0
2.75	2.2125	6.0
3.0	2.416	6.0
3.25	1.7039	6.0
3.5	2.3397	6.0
3.75	2.0345	6.0
4.0	2.1108	6.0
4.25	2.2634	6.0
4.5	2.3397	6.0
4.75	2.0345	6.25
5.0	2.3651	6.25

PCKRails Test
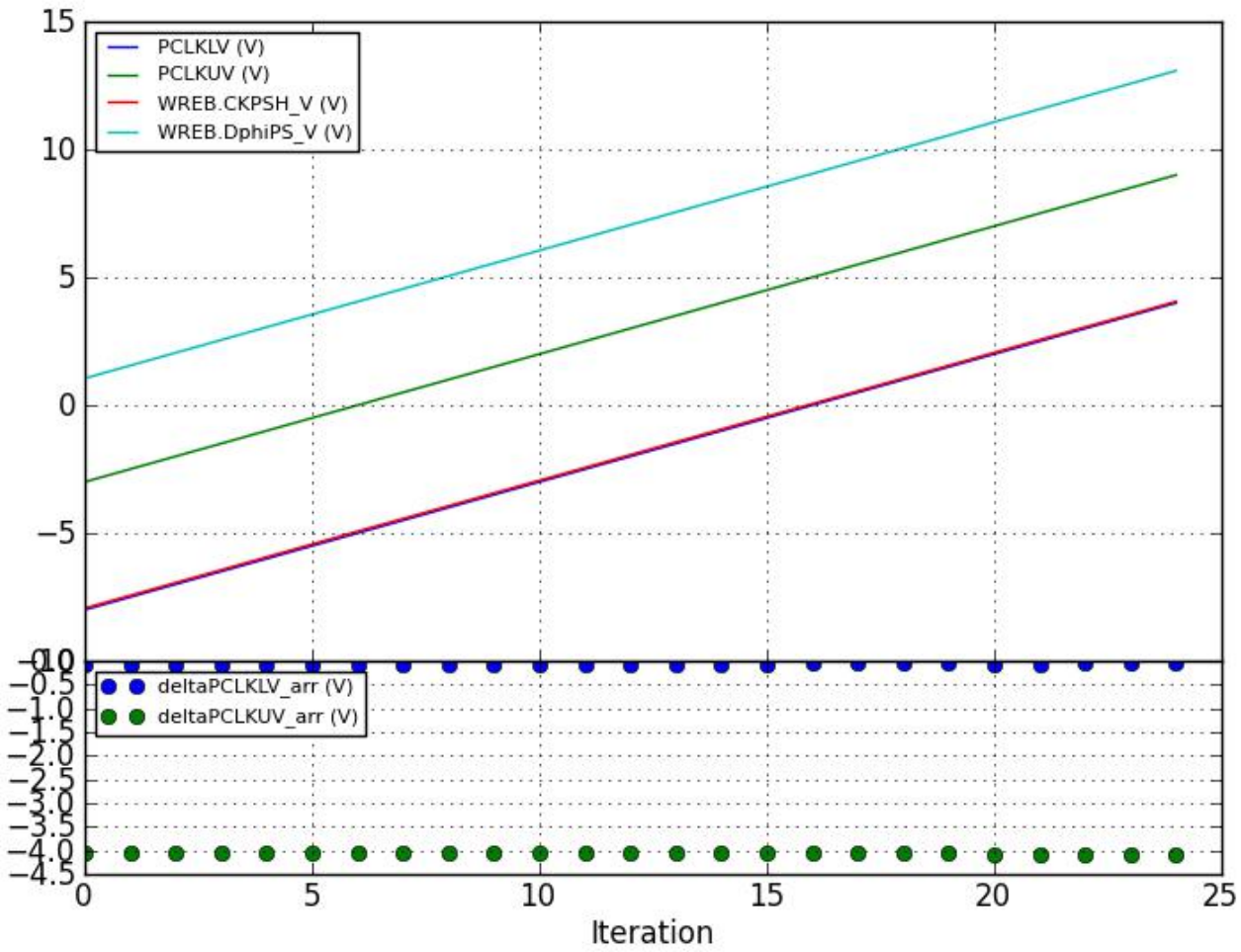
SCKRails Test
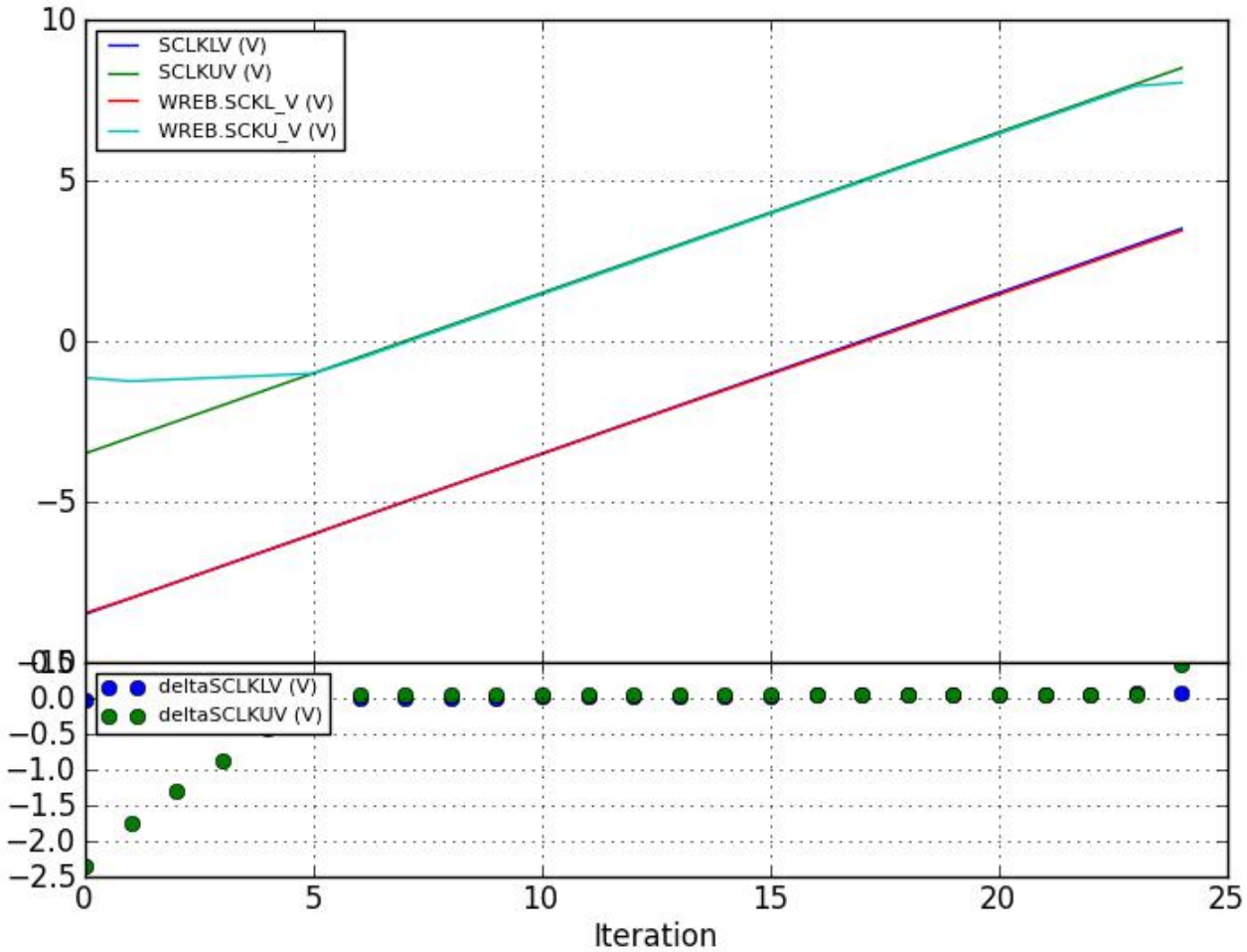
LV Gain: 0.993127. UV Gain: 0.877379. 44/50 points within tolerance.
Test FAILED.

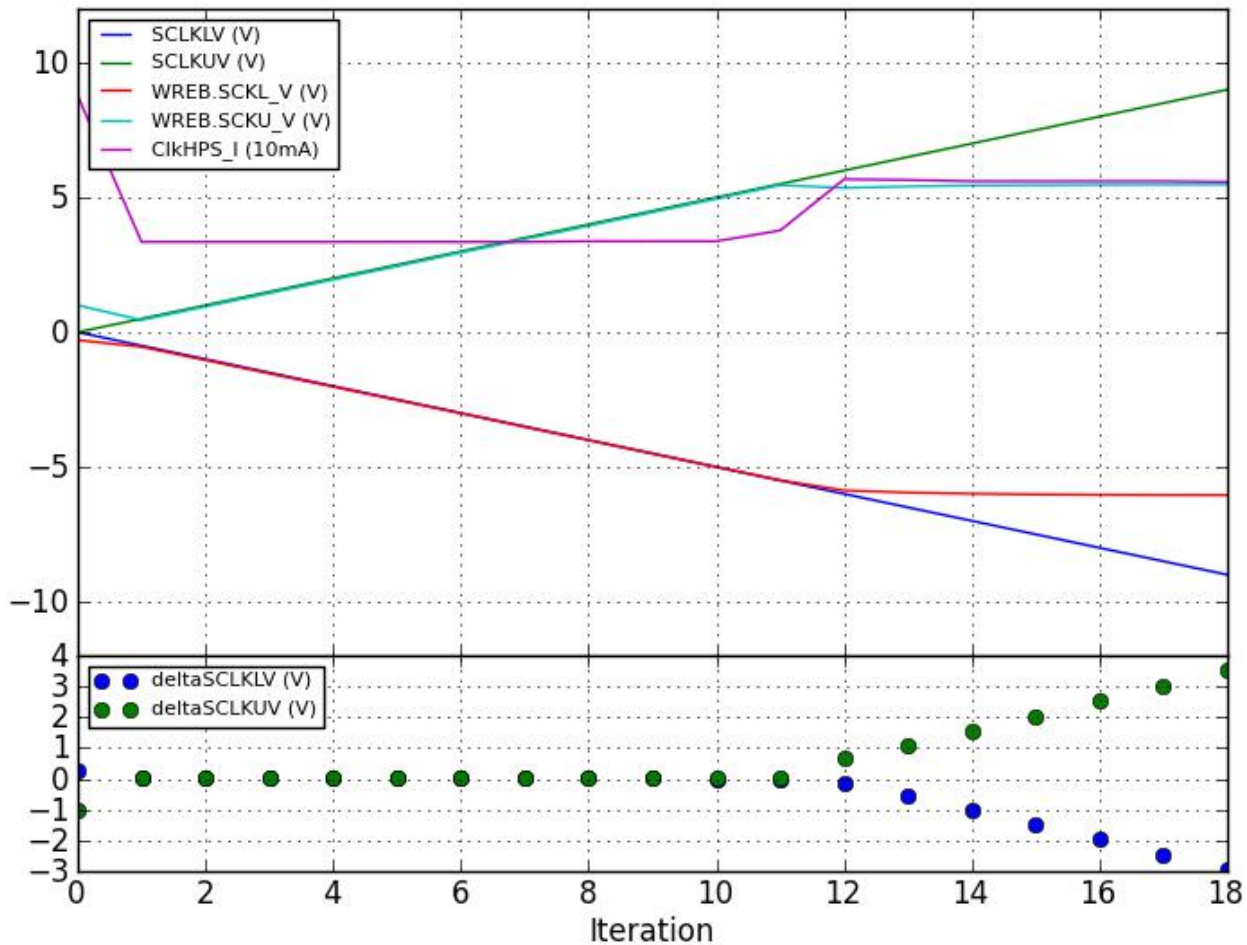| SCLKLV (V)	SCLKUV (V)	WREB.SCKL_V (V)	WREB.SCKU_V (V)	deltaSCLKLV (V)	deltaSCLKUV (V)
-8.5	-3.5	-8.4641	-1.1421	-0.0359	-2.3579
-8.0	-3.0	-7.9971	-1.2497	-0.0029	-1.7503
-7.5	-2.5	-7.502	-1.1887	0.002	-1.3113
-7.0	-2.0	-7.0023	-1.1314	0.0023	-0.8686
-6.5	-1.5	-6.5071	-1.0727	0.0071	-0.4273
-6.0	-1.0	-6.0104	-1.0094	0.0104	0.0094
-5.5	-0.5	-5.4985	-0.5508	-0.0015	0.0508
-5.0	0.0	-5.0011	-0.0465	0.0011	0.0465
-4.5	0.5	-4.5067	0.4494	0.0067	0.0506
-4.0	1.0	-4.0108	0.9544	0.0108	0.0456
-3.5	1.5	-3.5156	1.4534	0.0156	0.0466
-3.0	2.0	-3.0167	1.9508	0.0167	0.0492
-2.5	2.5	-2.5162	2.4506	0.0162	0.0494
-2.0	3.0	-2.021	2.9541	0.021	0.0459
-1.5	3.5	-1.5282	3.4592	0.0282	0.0408
-1.0	4.0	-1.0353	3.9619	0.0353	0.0381
-0.5	4.5	-0.5424	4.4563	0.0424	0.0437
0.0	5.0	-0.0481	4.9553	0.0481	0.0447
0.5	5.5	0.4539	5.4573	0.0461	0.0427
1.0	6.0	0.9514	5.954	0.0486	0.046
1.5	6.5	1.4442	6.4476	0.0558	0.0524
2.0	7.0	1.9394	6.9473	0.0606	0.0527
2.5	7.5	2.4422	7.4448	0.0578	0.0552
3.0	8.0	2.9358	7.9391	0.0642	0.0609
3.5	8.5	3.434	8.0368	0.066	0.4632

RGRails Test
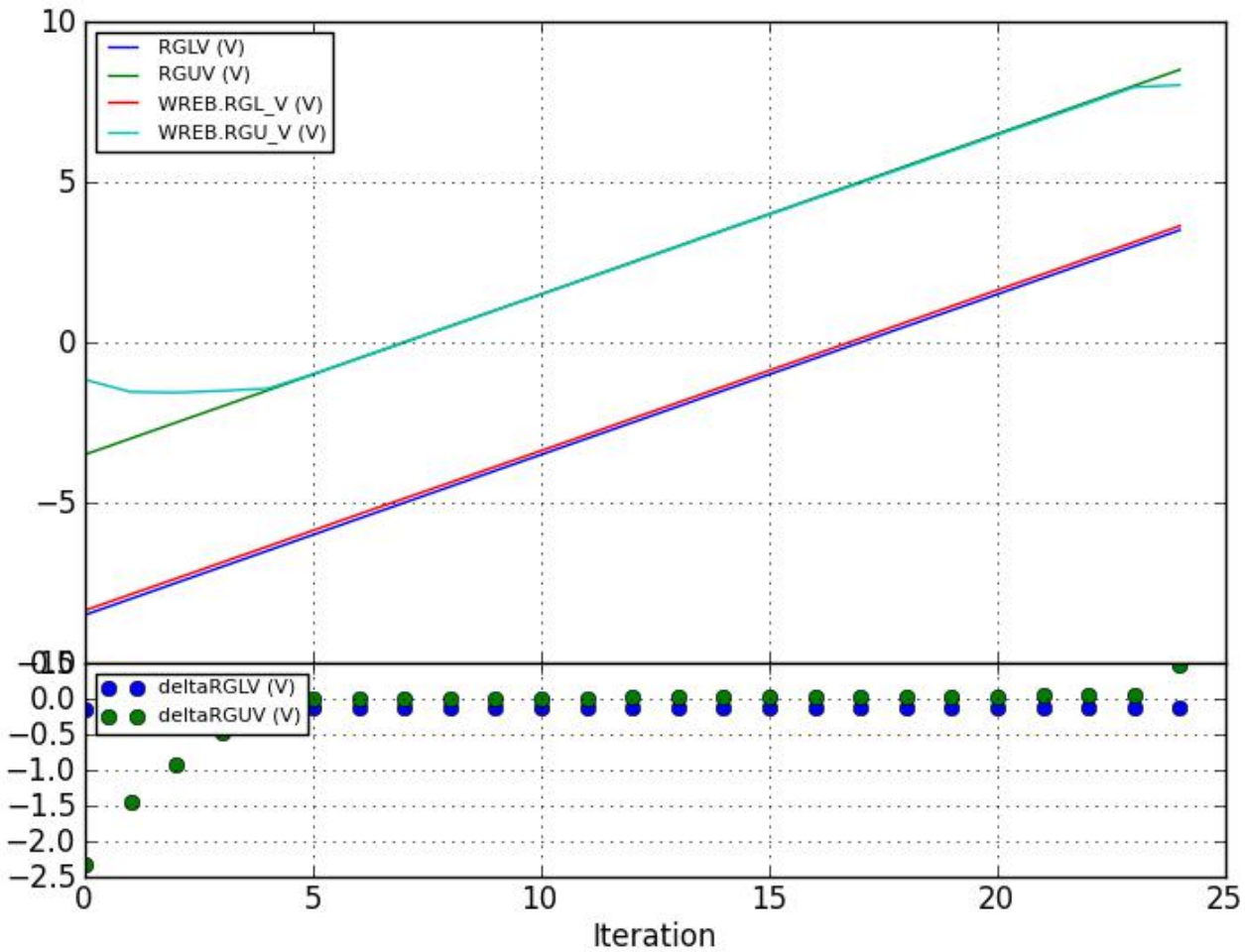
LV Gain: 0.998906. UV Gain: 0.897753. 45/50 points within tolerance.
Test FAILED.

| RGLV (V)	RGUV (V)	WREB.RGL_V (V)	WREB.RGU_V (V)	deltaRGLV (V)	deltaRGUV (V)
-8.5	-3.5	-8.3595	-1.1635	-0.1405	-2.3365
-8.0	-3.0	-7.8598	-1.5472	-0.1402	-1.4528
-7.5	-2.5	-7.3654	-1.5678	-0.1346	-0.9322
-7.0	-2.0	-6.8665	-1.5129	-0.1335	-0.4871
-6.5	-1.5	-6.3675	-1.4427	-0.1325	-0.0573
-6.0	-1.0	-5.867	-0.9911	-0.133	-0.0089
-5.5	-0.5	-5.3642	-0.4959	-0.1358	-0.0041
-5.0	0.0	-4.8683	0.0031	-0.1317	-0.0031
-4.5	0.5	-4.3755	0.5058	-0.1245	-0.0058
-4.0	1.0	-3.8773	1.004	-0.1227	-0.004
-3.5	1.5	-3.3798	1.4938	-0.1202	0.0062
-3.0	2.0	-2.8831	1.9905	-0.1169	0.0095
-2.5	2.5	-2.3781	2.4849	-0.1219	0.0151
-2.0	3.0	-1.8799	2.9839	-0.1201	0.0161
-1.5	3.5	-1.3786	3.4859	-0.1214	0.0141
-1.0	4.0	-0.8789	3.9818	-0.1211	0.0182
-0.5	4.5	-0.3799	4.4769	-0.1201	0.0231
0.0	5.0	0.1213	4.9698	-0.1213	0.0302
0.5	5.5	0.6264	5.4634	-0.1264	0.0366
1.0	6.0	1.1253	5.9639	-0.1253	0.0361
1.5	6.5	1.6273	6.4644	-0.1273	0.0356
2.0	7.0	2.124	6.9557	-0.124	0.0443
2.5	7.5	2.6268	7.4547	-0.1268	0.0453
3.0	8.0	3.1235	7.959	-0.1235	0.041
3.5	8.5	3.6285	8.02	-0.1285	0.48

Diverging SCKRails Test 0V

LV Gain: 0.718486. UV Gain: 0.623613. 23/38 points within tolerance.
Test FAILED.

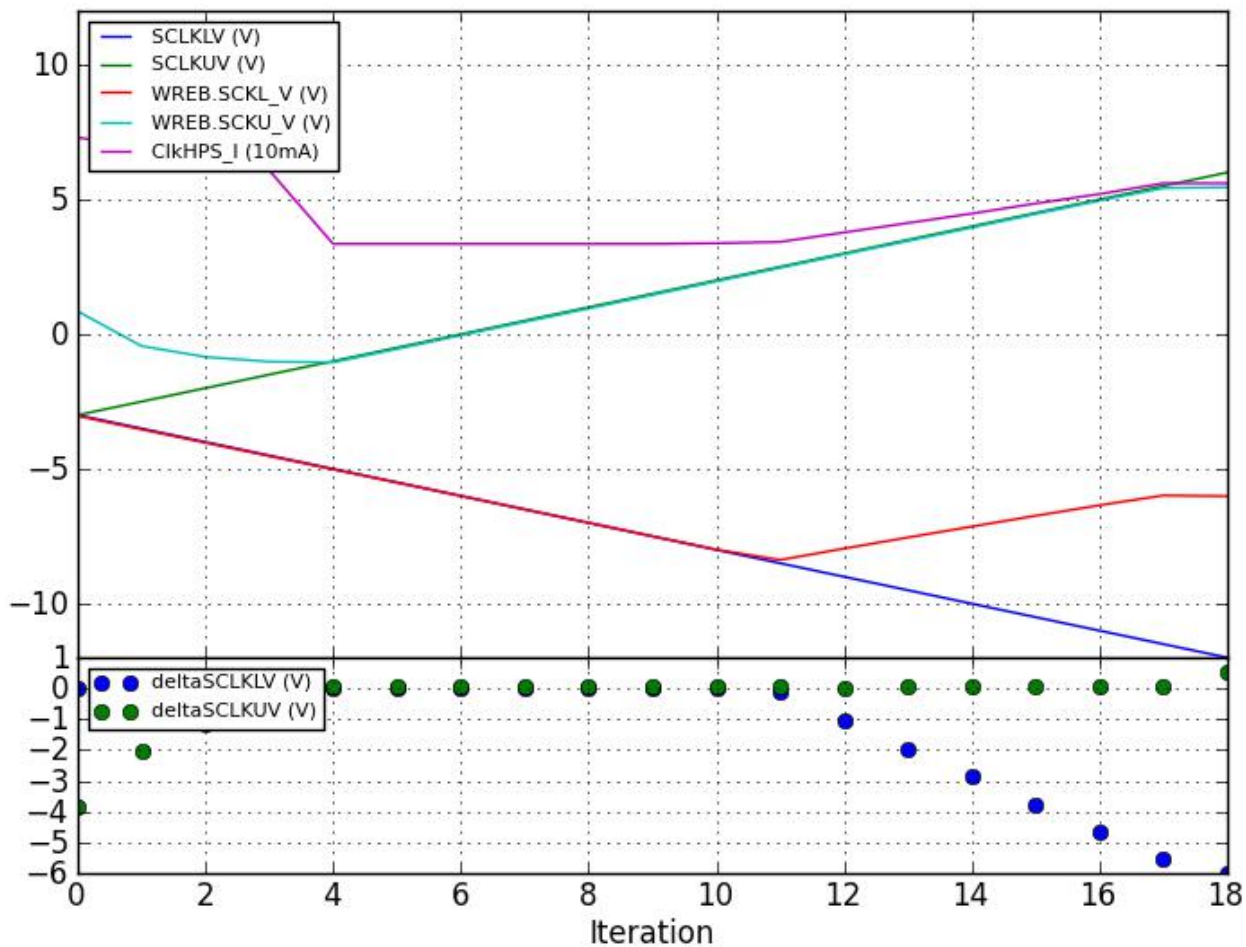| SCLKLV (V)	SCLKUV (V)	WREB.SCKL_V (V)	WREB.SCKU_V (V)	ClkHPS_I (10mA)	deltaSCLKLV (V)	deltaSCLKUV (V)
0.0	0.0	-0.2937	0.9979	8.775	0.2937	-0.9979
-0.5	0.5	-0.5432	0.4494	3.35	0.0432	0.0506
-1.0	1.0	-1.0376	0.9499	3.35	0.0376	0.0501
-1.5	1.5	-1.5312	1.4458	3.35	0.0312	0.0542
-2.0	2.0	-2.0248	1.9485	3.35	0.0248	0.0515
-2.5	2.5	-2.5185	2.446	3.35	0.0185	0.054
-3.0	3.0	-3.0121	2.9518	3.35	0.0121	0.0482
-3.5	3.5	-3.5126	3.4492	3.35	0.0126	0.0508
-4.0	4.0	-4.0108	3.9474	3.375	0.0108	0.0526
-4.5	4.5	-4.5074	4.4479	3.375	0.0074	0.0521
-5.0	5.0	-5.0018	4.9507	3.375	0.0018	0.0493
-5.5	5.5	-5.4947	5.4558	3.775	-0.0053	0.0442
-6.0	6.0	-5.8723	5.3535	5.675	-0.1277	0.6465
-6.5	6.5	-5.9502	5.4085	5.65	-0.5498	1.0915
-7.0	7.0	-5.9937	5.4413	5.6	-1.0063	1.5587
-7.5	7.5	-6.0196	5.4573	5.6	-1.4804	2.0427
-8.0	8.0	-6.0333	5.4672	5.6	-1.9667	2.5328
-8.5	8.5	-6.0417	5.4741	5.6	-2.4583	3.0259
-9.0	9.0	-6.0463	5.4764	5.575	-2.9537	3.5236

Diverging SCKRails Test 3V
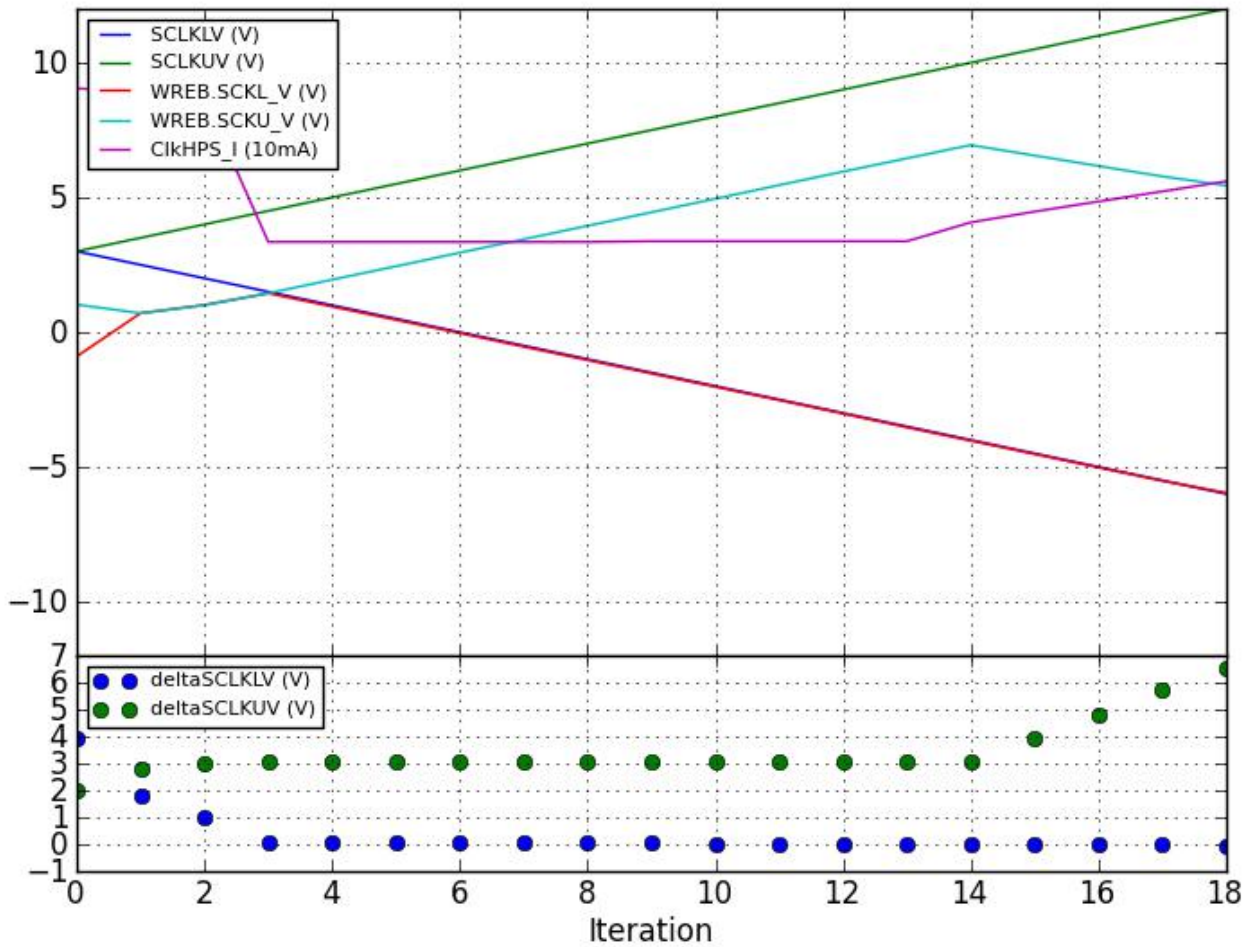
LV Gain: 0.800345. UV Gain: 0.709486. 16/38 points within tolerance.

Test FAILED.

| SCLKLV (V)	SCLKUV (V)	WREB.SCKL_V (V)	WREB.SCKU_V (V)	ClkHPS_I (10mA)	deltaSCLKLV (V)	deltaSCLKUV (V)
3.0	3.0	-0.901	1.0254	9.05	3.901	1.9746
2.5	3.5	0.705	0.705	8.9	1.795	2.795
2.0	4.0	1.0109	0.9995	8.675	0.9891	3.0005
1.5	4.5	1.4435	1.4458	3.35	0.0565	3.0542
1.0	5.0	0.9506	1.9493	3.35	0.0494	3.0507
0.5	5.5	0.457	2.4452	3.35	0.043	3.0548
0.0	6.0	-0.0351	2.9518	3.35	0.0351	3.0482
-0.5	6.5	-0.5386	3.45	3.35	0.0386	3.05
-1.0	7.0	-1.0361	3.9482	3.35	0.0361	3.0518
-1.5	7.5	-1.5335	4.4487	3.375	0.0335	3.0513
-2.0	8.0	-2.0287	4.9515	3.375	0.0287	3.0485
-2.5	8.5	-2.5208	5.4565	3.375	0.0208	3.0435
-3.0	9.0	-3.0205	5.9593	3.375	0.0205	3.0407
-3.5	9.5	-3.5316	6.4514	3.375	0.0316	3.0486
-4.0	10.0	-4.0276	6.9435	4.075	0.0276	3.0565
-4.5	10.5	-4.5235	6.5536	4.475	0.0235	3.9464
-5.0	11.0	-5.0224	6.1668	4.85	0.0224	4.8332
-5.5	11.5	-5.5176	5.7808	5.225	0.0176	5.7192
-6.0	12.0	-5.9593	5.4413	5.6	-0.0407	6.5587

Diverging SCKRails Test -3V

LV Gain: 0.369340. UV Gain: 0.760833. 26/38 points within tolerance.
Test FAILED.

| SCLKLV (V)	SCLKUV (V)	WREB.SCKL_V (V)	WREB.SCKU_V (V)	ClkHPS_I (10mA)	deltaSCLKLV (V)	deltaSCLKUV (V)
-3.0	-3.0	-3.0334	0.8507	7.3	0.0334	-3.8507
-3.5	-2.5	-3.5339	-0.4395	6.925	0.0339	-2.0605
-4.0	-2.0	-4.0291	-0.8446	6.5	0.0291	-1.1554
-4.5	-1.5	-4.5219	-1.0193	6.075	0.0219	-0.4807
-5.0	-1.0	-5.0148	-1.0445	3.35	0.0148	0.0445
-5.5	-0.5	-5.5077	-0.5486	3.35	0.0077	0.0486
-6.0	0.0	-6.0013	-0.0404	3.35	0.0013	0.0404
-6.5	0.5	-6.5041	0.4562	3.35	0.0041	0.0438
-7.0	1.0	-7.0007	0.9544	3.35	0.0007	0.0456
-7.5	1.5	-7.4966	1.4565	3.35	-0.0034	0.0435
-8.0	2.0	-7.9941	1.9585	3.375	-0.0059	0.0415
-8.5	2.5	-8.3763	2.462	3.425	-0.1237	0.038
-9.0	3.0	-7.9529	2.9648	3.775	-1.0471	0.0352
-9.5	3.5	-7.5424	3.4584	4.125	-1.9576	0.0416
-10.0	4.0	-7.1388	3.9566	4.475	-2.8612	0.0434
-10.5	4.5	-6.7368	4.4601	4.85	-3.7632	0.0399
-11.0	5.0	-6.3477	4.9561	5.2	-4.6523	0.0439
-11.5	5.5	-5.9837	5.4214	5.6	-5.5163	0.0786
-12.0	6.0	-6.0104	5.4512	5.6	-5.9896	0.5488

Diverging RGRails Test 0V
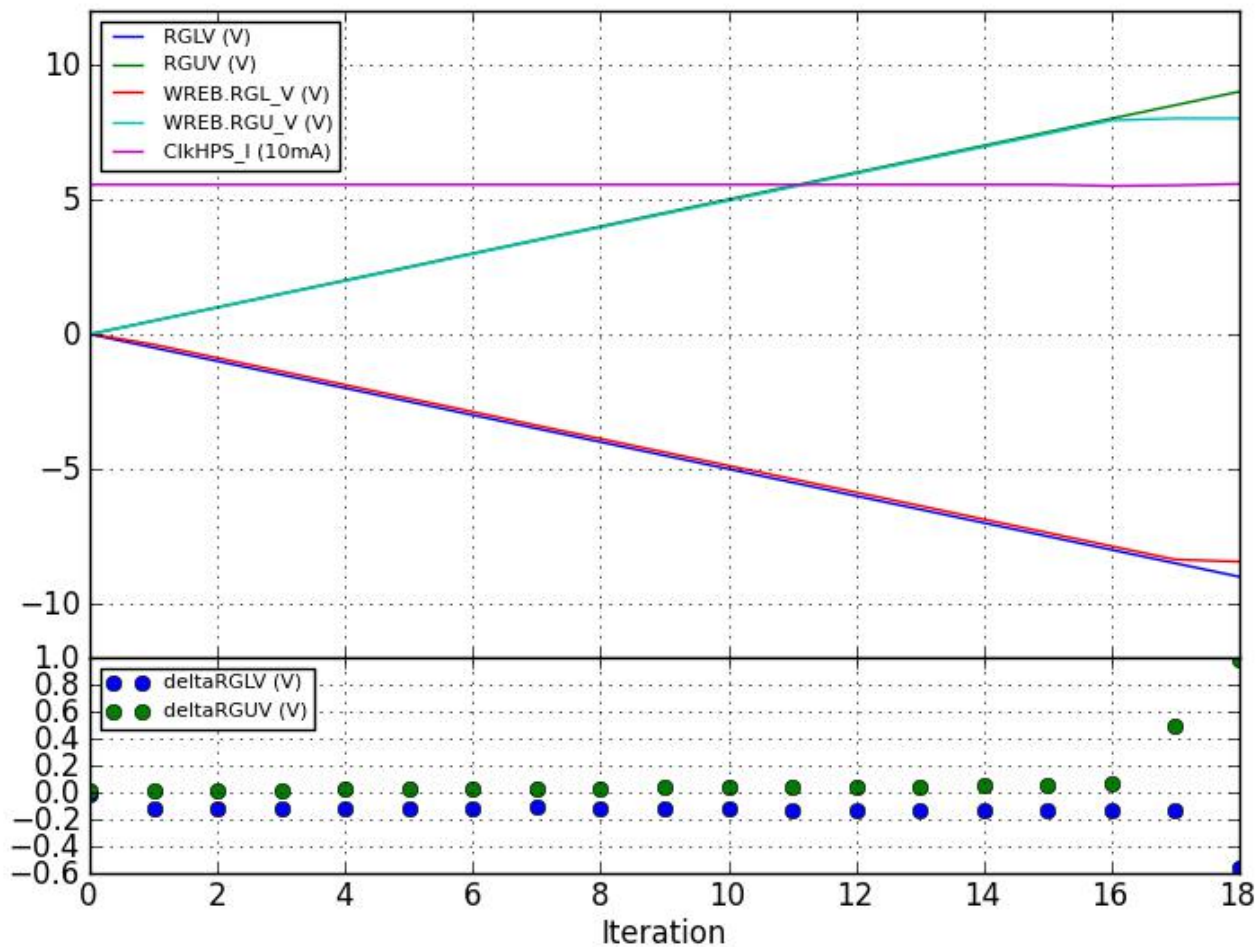
LV Gain: 0.981025. UV Gain: 0.952229. 35/38 points within tolerance.
Test PASSED.

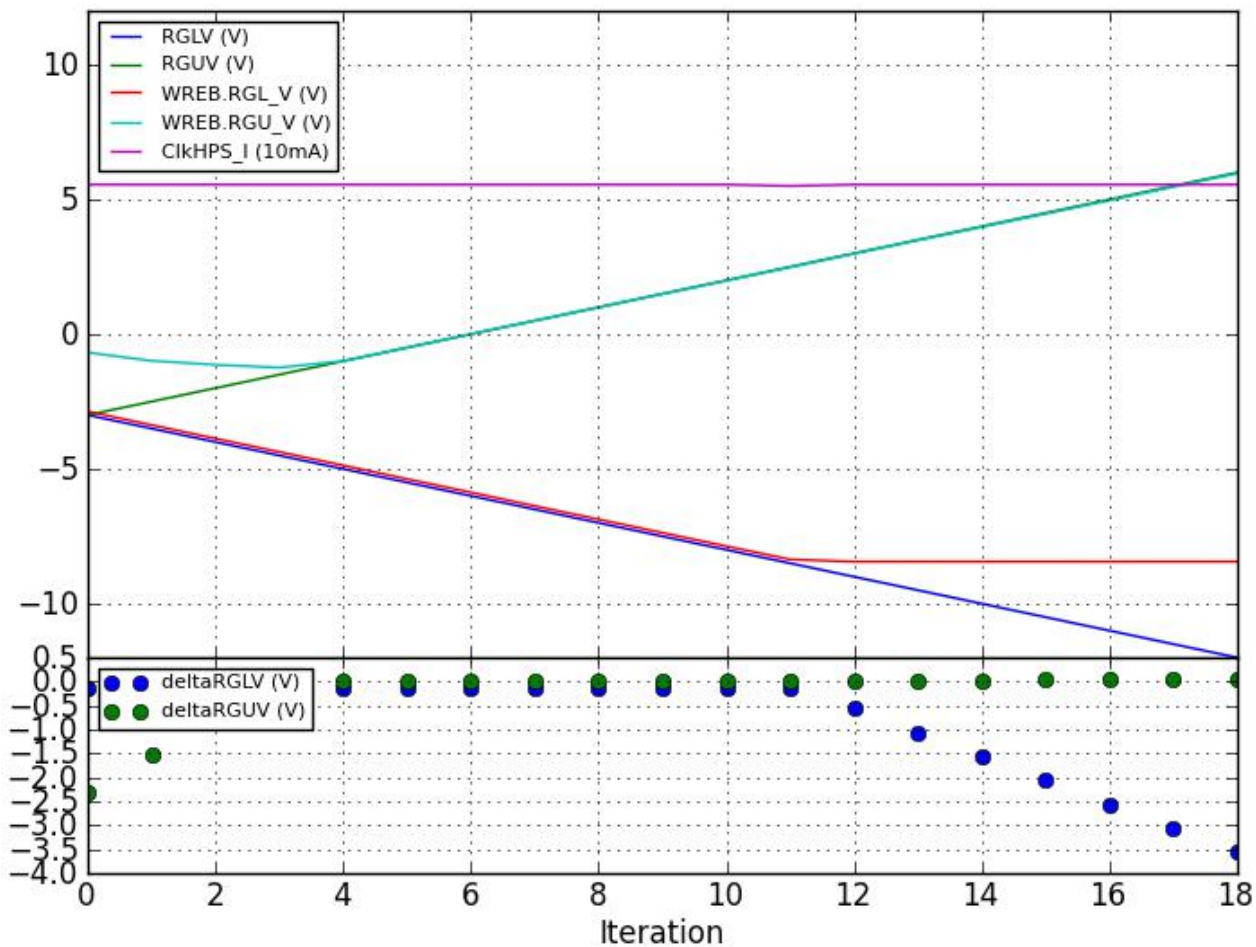| RGLV (V)	RGUV (V)	WREB.RGL_V (V)	WREB.RGU_V (V)	ClkHPS_I (10mA)	deltaRGLV (V)	deltaRGUV (V)
0.0	0.0	0.016	-0.0114	5.55	-0.016	0.0114
-0.5	0.5	-0.3822	0.4883	5.55	-0.1178	0.0117
-1.0	1.0	-0.8835	0.9865	5.55	-0.1165	0.0135
-1.5	1.5	-1.3817	1.4839	5.55	-0.1183	0.0161
-2.0	2.0	-1.8814	1.9775	5.55	-0.1186	0.0225
-2.5	2.5	-2.3842	2.4742	5.55	-0.1158	0.0258
-3.0	3.0	-2.8801	2.9785	5.55	-0.1199	0.0215
-3.5	3.5	-3.3875	3.4752	5.55	-0.1125	0.0248
-4.0	4.0	-3.8826	3.9673	5.55	-0.1174	0.0327
-4.5	4.5	-4.3808	4.4632	5.55	-0.1192	0.0368
-5.0	5.0	-4.8782	4.9553	5.55	-0.1218	0.0447
-5.5	5.5	-5.3726	5.4573	5.55	-0.1274	0.0427
-6.0	6.0	-5.8693	5.9593	5.55	-0.1307	0.0407
-6.5	6.5	-6.369	6.456	5.55	-0.131	0.044
-7.0	7.0	-6.871	6.9496	5.55	-0.129	0.0504
-7.5	7.5	-7.3692	7.4409	5.55	-0.1308	0.0591
-8.0	8.0	-7.8697	7.9338	5.5	-0.1303	0.0662
-8.5	8.5	-8.3641	8.0078	5.525	-0.1359	0.4922
-9.0	9.0	-8.4381	8.0078	5.575	-0.5619	0.9922

Diverging RGRails Test 3V
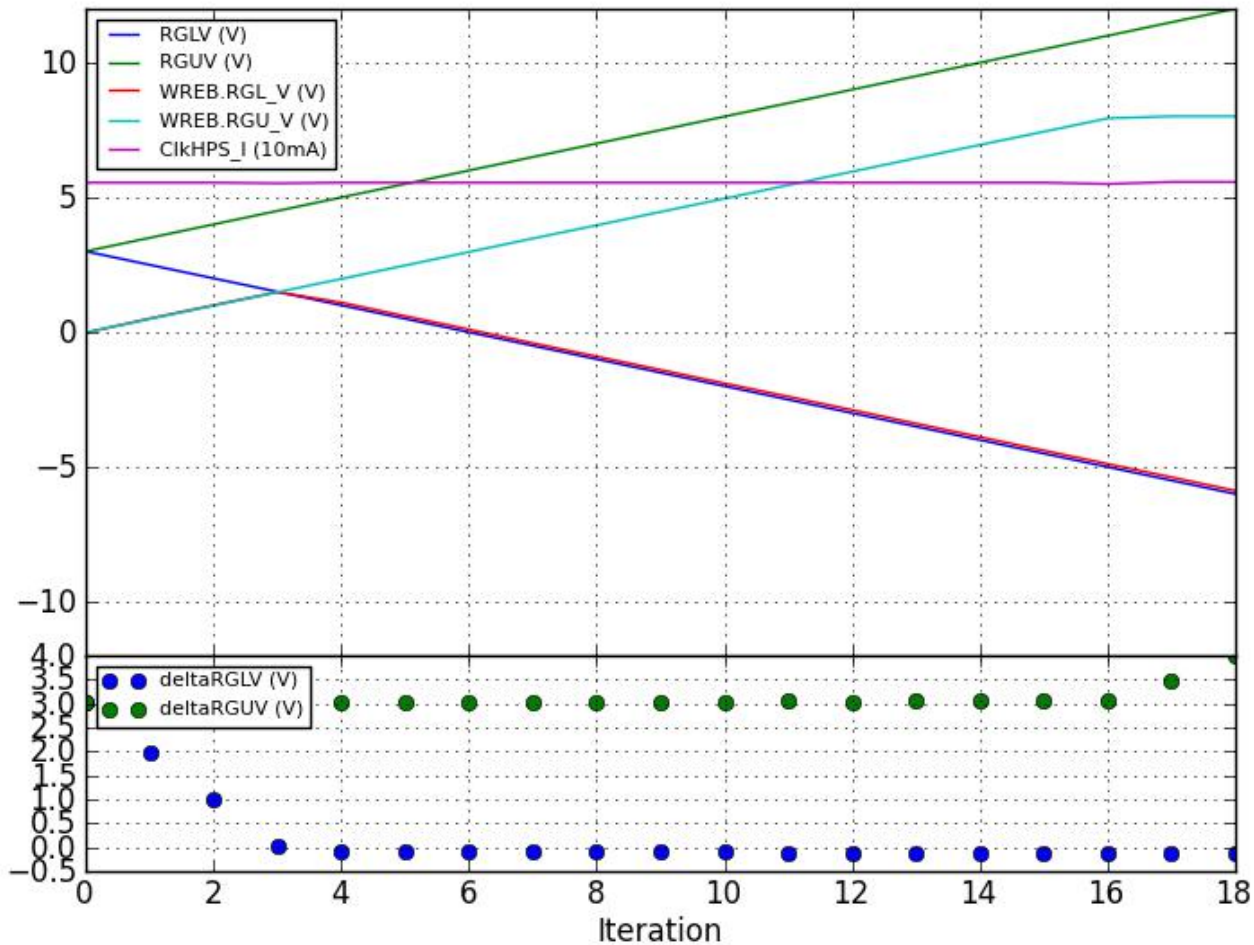
LV Gain: 0.811144. UV Gain: 0.952304. 16/38 points within tolerance.
Test FAILED.

| RGLV (V)	RGUV (V)	WREB.RGL_V (V)	WREB.RGU_V (V)	ClkHPS_I (10mA)	deltaRGLV (V)	deltaRGUV (V)
3.0	3.0	-0.0191	-0.0107	5.55	3.0191	3.0107
2.5	3.5	0.5066	0.4898	5.55	1.9934	3.0102
2.0	4.0	0.9995	0.9865	5.55	1.0005	3.0135
1.5	4.5	1.49	1.4824	5.525	0.01	3.0176
1.0	5.0	1.1017	1.9783	5.55	-0.1017	3.0217
0.5	5.5	0.5981	2.475	5.55	-0.0981	3.025
0.0	6.0	0.1022	2.9778	5.55	-0.1022	3.0222
-0.5	6.5	-0.4051	3.4767	5.55	-0.0949	3.0233
-1.0	7.0	-0.9018	3.9673	5.55	-0.0982	3.0327
-1.5	7.5	-1.3977	4.464	5.55	-0.1023	3.036
-2.0	8.0	-1.8967	4.9568	5.55	-0.1033	3.0432
-2.5	8.5	-2.3895	5.4558	5.55	-0.1105	3.0442
-3.0	9.0	-2.8862	5.9586	5.55	-0.1138	3.0414
-3.5	9.5	-3.389	6.4545	5.55	-0.111	3.0455
-4.0	10.0	-3.8887	6.9489	5.55	-0.1113	3.0511
-4.5	10.5	-4.3892	7.4402	5.55	-0.1108	3.0598
-5.0	11.0	-4.8866	7.9346	5.5	-0.1134	3.0654
-5.5	11.5	-5.3818	8.0109	5.575	-0.1182	3.4891
-6.0	12.0	-5.8815	8.0109	5.575	-0.1185	3.9891

Diverging RGRails Test -3V

LV Gain: 0.666043. UV Gain: 0.852650. 27/38 points within tolerance.
Test FAILED.

RGLV (V)	RGUV (V)	WREB.RGL_V (V)	WREB.RGU_V (V)	ClkHPS_I (10mA)	deltaRGLV (V)	deltaRGUV (V)
-3.0	-3.0	-2.8656	-0.6821	5.55	-0.1344	-2.3179
-3.5	-2.5	-3.3714	-0.9865	5.55	-0.1286	-1.5135
-4.0	-2.0	-3.8727	-1.1353	5.55	-0.1273	-0.8647
-4.5	-1.5	-4.3709	-1.2367	5.55	-0.1291	-0.2633
-5.0	-1.0	-4.8698	-0.9964	5.55	-0.1302	-0.0036
-5.5	-0.5	-5.3741	-0.4974	5.55	-0.1259	-0.0026
-6.0	0.0	-5.8701	0.0053	5.55	-0.1299	-0.0053
-6.5	0.5	-6.3759	0.5028	5.55	-0.1241	-0.0028
-7.0	1.0	-6.8726	0.9926	5.55	-0.1274	0.0074
-7.5	1.5	-7.37	1.49	5.55	-0.13	0.01
-8.0	2.0	-7.8682	1.9844	5.55	-0.1318	0.0156
-8.5	2.5	-8.3603	2.4826	5.5	-0.1397	0.0174
-9.0	3.0	-8.4396	2.9854	5.55	-0.5604	0.0146
-9.5	3.5	-8.4389	3.4828	5.55	-1.0611	0.0172
-10.0	4.0	-8.4389	3.9772	5.55	-1.5611	0.0228
-10.5	4.5	-8.4381	4.4678	5.55	-2.0619	0.0322
-11.0	5.0	-8.4396	4.9644	5.55	-2.5604	0.0356
-11.5	5.5	-8.4373	5.4626	5.55	-3.0627	0.0374
-12.0	6.0	-8.4373	5.9631	5.55	-3.5627	0.0369

OG Test
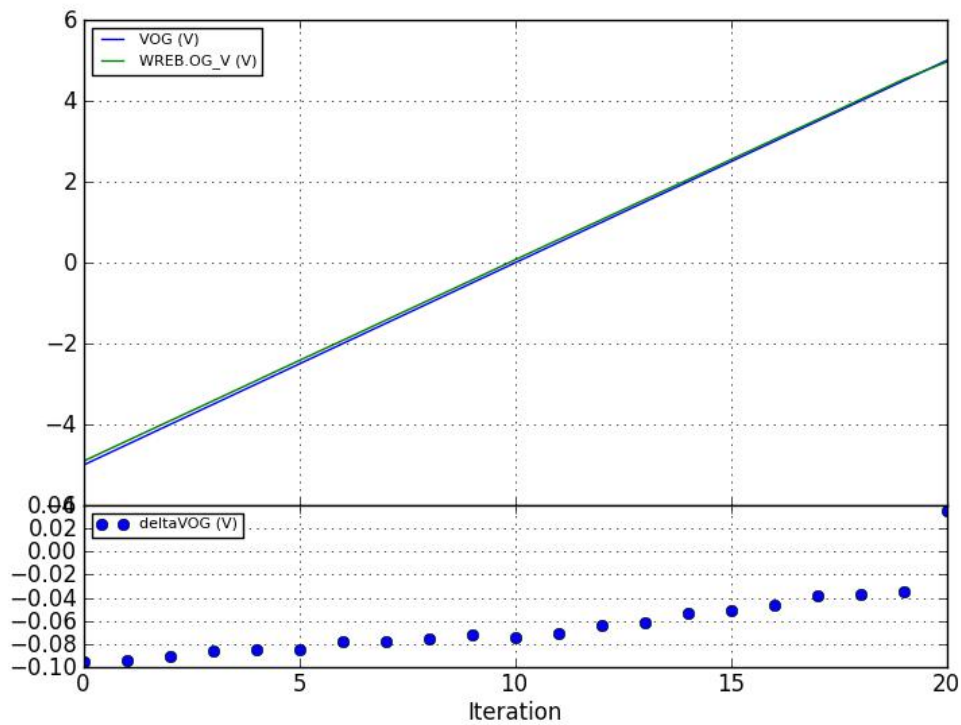
Gain: 0.991752. 21/21 points within tolerance.
Test PASSED.

VOG (V)	WREB.OG_V (V)	deltaVOG (V)
-5.0	-4.9045	-0.0955
-4.5	-4.406	-0.094
-4.0	-3.9091	-0.0909
-3.5	-3.414	-0.086
-3.0	-2.9155	-0.0845
-2.5	-2.4153	-0.0847
-2.0	-1.9218	-0.0782
-1.5	-1.4217	-0.0783
-1.0	-0.9248	-0.0752
-0.5	-0.428	-0.072
0.0	0.0739	-0.0739
0.5	0.5707	-0.0707
1.0	1.0641	-0.0641
1.5	1.561	-0.061
2.0	2.0528	-0.0528
2.5	2.5513	-0.0513
3.0	3.0464	-0.0464
3.5	3.5382	-0.0382
4.0	4.0367	-0.0367
4.5	4.5352	-0.0352
5.0	4.9649	0.0351

OD Test
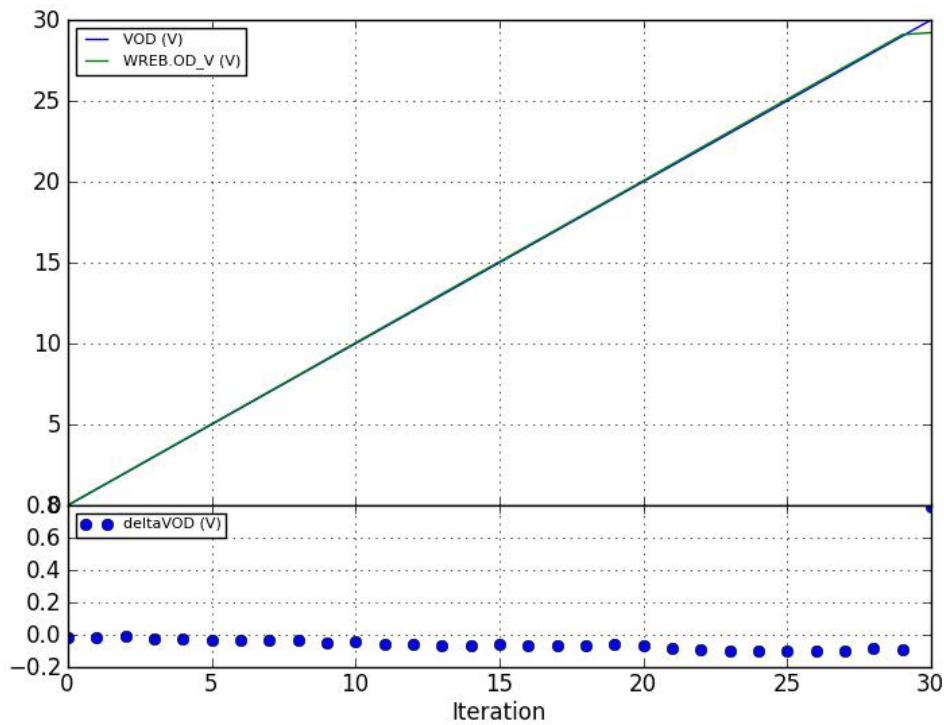
Gain: 0.997631. 30/31 points within tolerance.
Test PASSED.

VOD (V)	WREB.OD_V (V)	deltaVOD (V)
0	0.0134	-0.0134
1	1.0172	-0.0172
2	2.0125	-0.0125
3	3.028	-0.028
4	4.025	-0.025
5	5.0304	-0.0304
6	6.0324	-0.0324
7	7.0361	-0.0361
8	8.0365	-0.0365
9	9.0486	-0.0486
10	10.0456	-0.0456
11	11.0544	-0.0544
12	12.0564	-0.0564
13	13.0669	-0.0669
14	14.0706	-0.0706
15	15.0575	-0.0575
16	16.0629	-0.0629
17	17.0633	-0.0633
18	18.0653	-0.0653
19	19.0623	-0.0623
20	20.0661	-0.0661
21	21.0815	-0.0815
22	22.0953	-0.0953
23	23.0974	-0.0974
24	24.1028	-0.1028
25	25.1015	-0.1015
26	26.0985	-0.0985
27	27.0972	-0.0972
28	28.0858	-0.0858
29	29.0895	-0.0895
30	29.2087	0.7913

GD Test
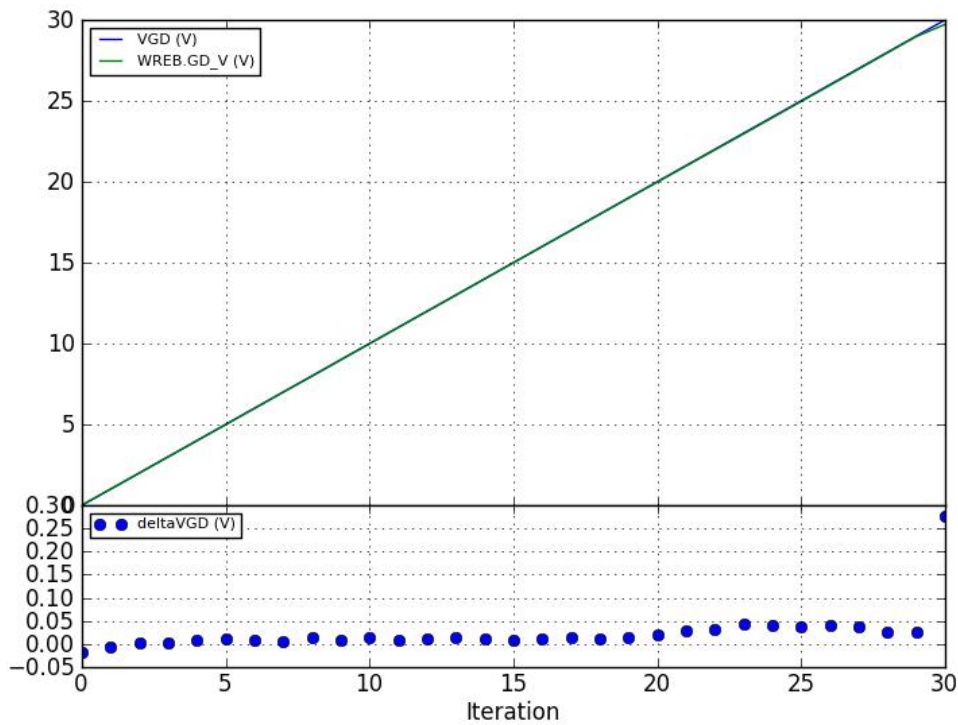
Gain: 0.997109. 30/31 points within tolerance.
Test PASSED.

VGD (V)	WREB.GD_V (V)	deltaVGD (V)
0	0.0185	-0.0185
1	1.0071	-0.0071
2	1.9974	0.0026
3	2.9977	0.0023
4	3.9914	0.0086
5	4.9884	0.0116
6	5.9904	0.0096
7	6.9958	0.0042
8	7.9845	0.0155
9	8.9915	0.0085
10	9.9869	0.0131
11	10.9923	0.0077
12	11.9876	0.0124
13	12.9846	0.0154
14	13.99	0.01
15	14.9921	0.0079
16	15.9891	0.0109
17	16.9844	0.0156
18	17.9881	0.0119
19	18.9851	0.0149
20	19.9805	0.0195
21	20.9708	0.0292
22	21.9678	0.0322
23	22.9564	0.0436
24	23.9601	0.0399
25	24.9622	0.0378
26	25.9592	0.0408
27	26.9612	0.0388
28	27.9733	0.0267
29	28.9737	0.0263
30	29.7223	0.2777

RD Test
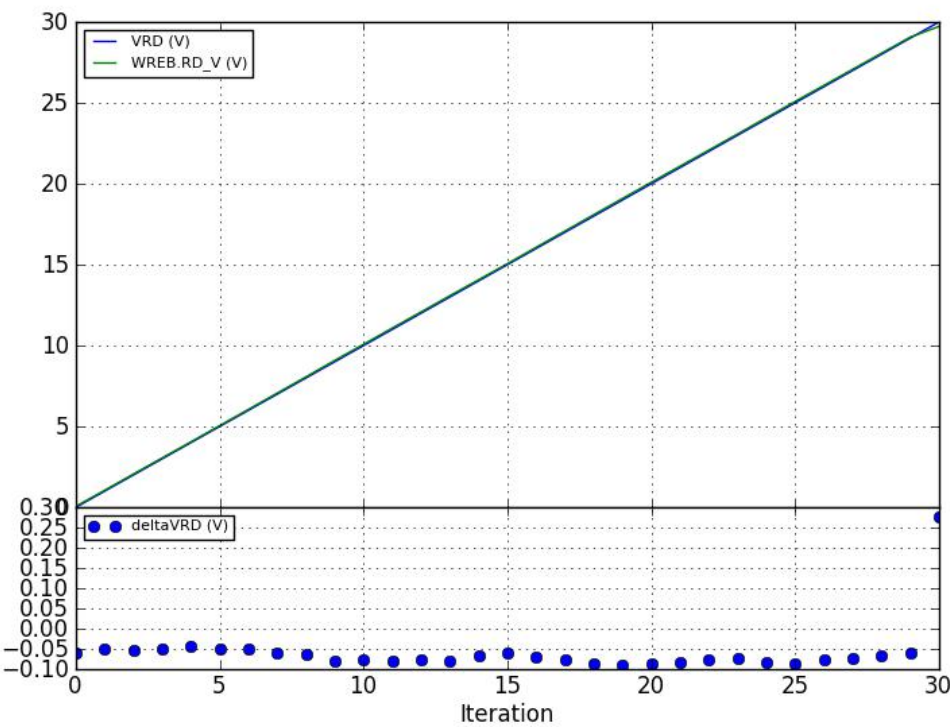
Gain: 0.998728. 30/31 points within tolerance.
Test PASSED.

VRD (V)	WREB.RD_V (V)	deltaVRD (V)
0	0.0587	-0.0587
1	1.049	-0.049
2	2.0544	-0.0544
3	3.0515	-0.0515
4	4.0434	-0.0434
5	5.0488	-0.0488
6	6.0509	-0.0509
7	7.0613	-0.0613
8	8.0634	-0.0634
9	9.0805	-0.0805
10	10.0758	-0.0758
11	11.0812	-0.0812
12	12.0766	-0.0766
13	13.0786	-0.0786
14	14.0656	-0.0656
15	15.0592	-0.0592
16	16.0713	-0.0713
17	17.075	-0.075
18	18.0855	-0.0855
19	19.0892	-0.0892
20	20.0879	-0.0879
21	21.0832	-0.0832
22	22.0769	-0.0769
23	23.0739	-0.0739
24	24.0826	-0.0826
25	25.0864	-0.0864
26	26.0767	-0.0767
27	27.072	-0.072
28	28.0656	-0.0656
29	29.0593	-0.0593
30	29.7223	0.2777