

RADIATION TEST REPORT

PRODUCT:	OP484AM/QMLL
GAMMA:	31.3k, 52.4k, 77.7k, 102k/ TM1019 Condition D
GAMMA SOURCE:	Co60
DOSE RATE:	9.4 mRad(si)/s
FACILITIES:	Si-Rel
TESTED:	12/11/2012 – 4/26/2013

The RADTESTSM DATA SERVICE is a compilation of radiation test results on Analog Devices' Space grade products. It is designed to assist customers in selecting the right product for applications where radiation is a consideration. Many products manufactured by Analog Devices, Inc. have been shown to be radiation tolerant to most tactical radiation environments. Analog Devices, Inc. does not make any claim to maintain or guarantee these levels of radiation tolerance without lot qualification test.

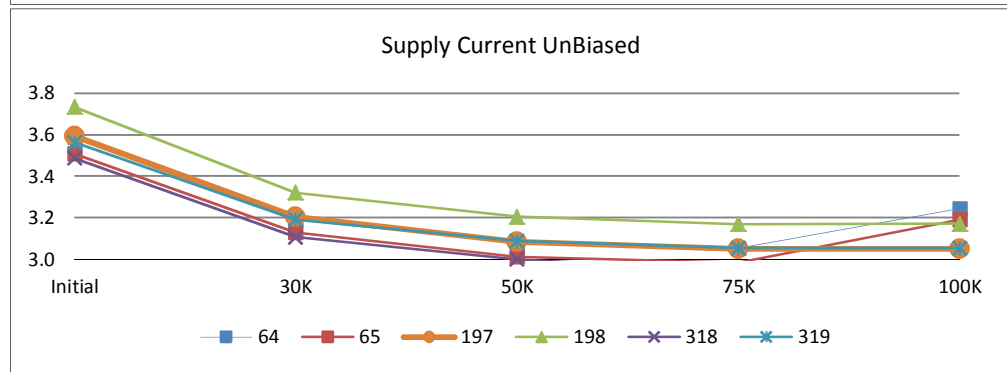
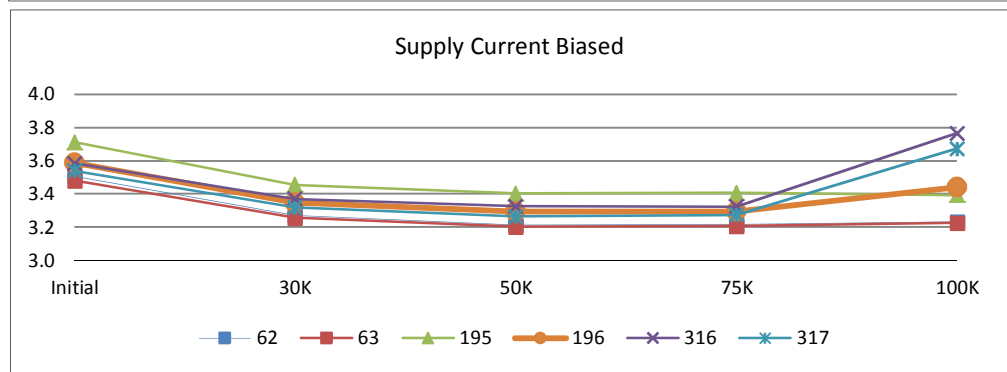
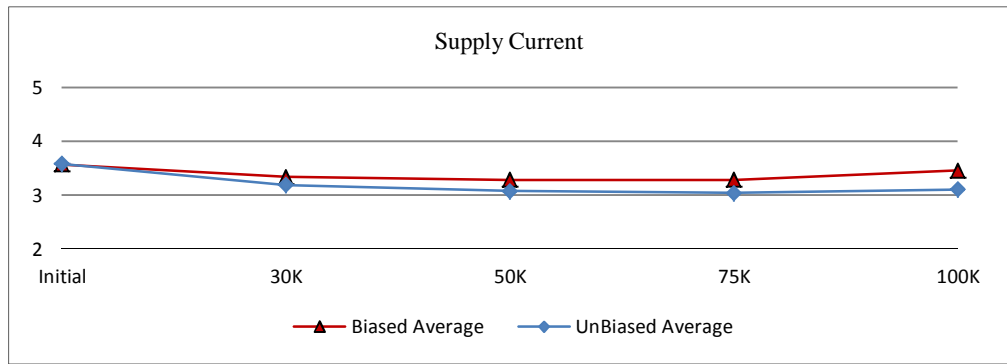
It is the responsibility of the Procuring Activity to screen products from Analog Devices, Inc. for compliance to Nuclear Hardness Critical Items (HCI) specifications.

WARNING:

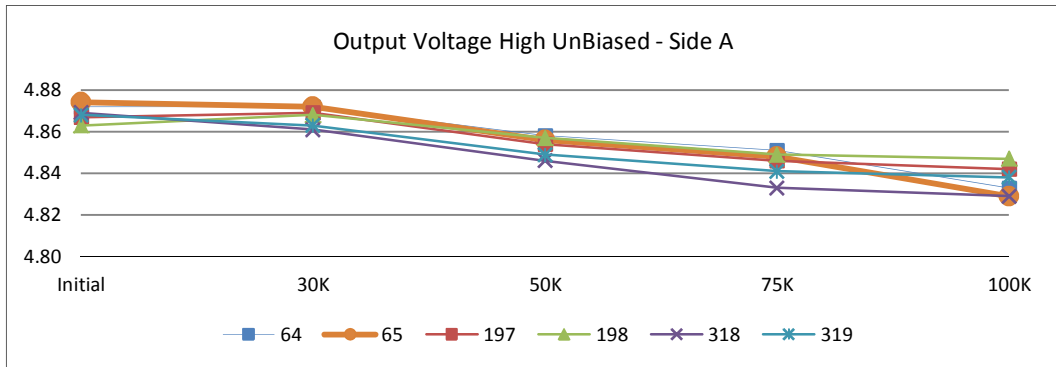
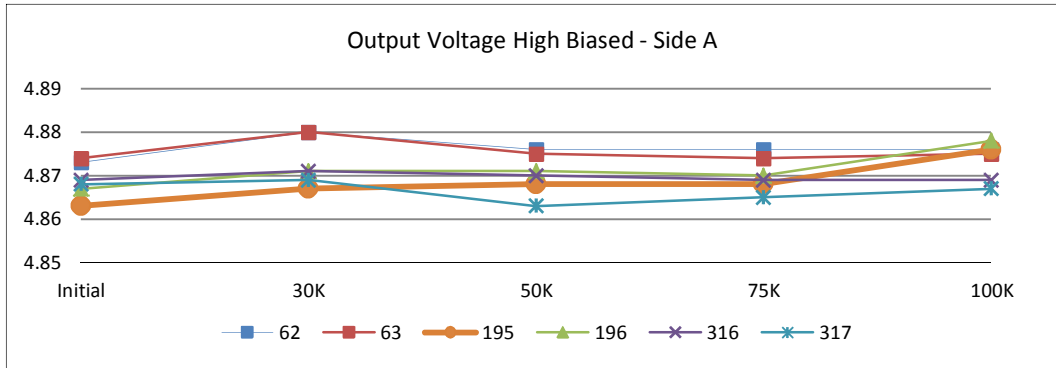
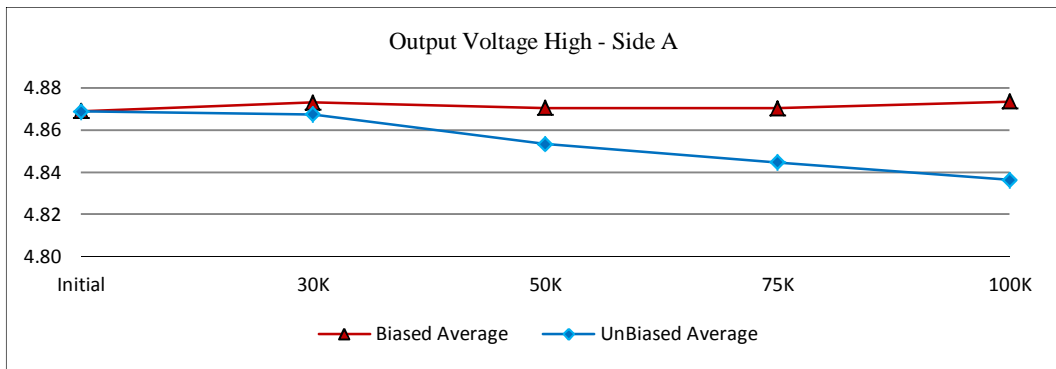
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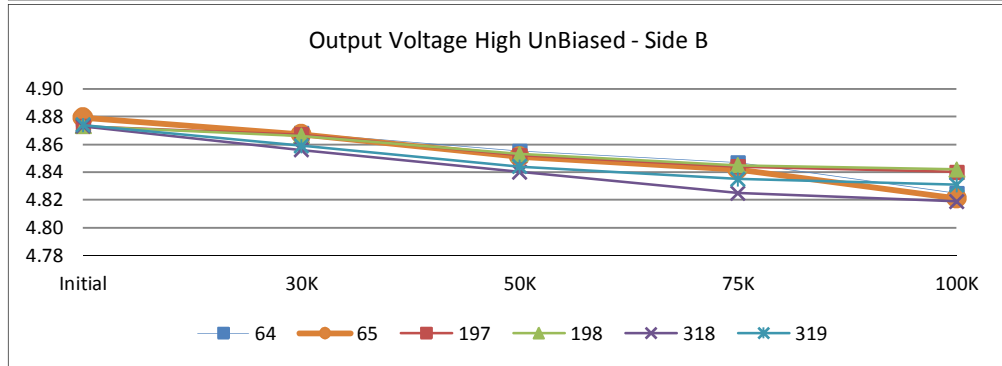
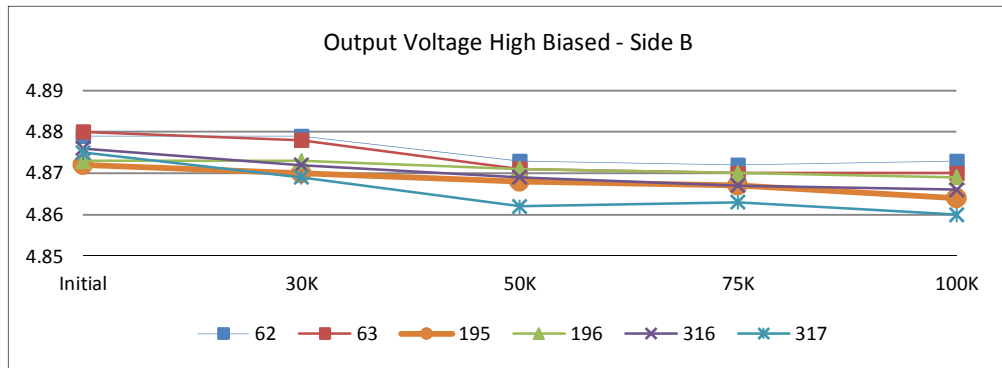
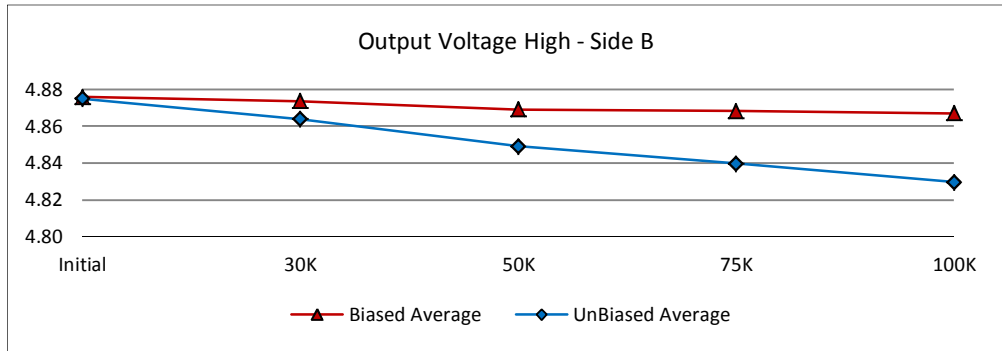
	T# 1	ISY+ @ Vs=+/-5V					mA
	SN	Initial	30K	50K	75K	100K	Limit
Control	61	3.585	3.599	3.598	3.599	3.609	<5.85
Biased	62	3.506	3.271	3.212	3.215	3.233	
	63	3.479	3.257	3.203	3.207	3.225	
	195	3.710	3.455	3.402	3.407	3.392	
	196	3.588	3.347	3.295	3.295	3.439	
	316	3.583	3.369	3.326	3.324	3.765	
	317	3.539	3.317	3.264	3.274	3.673	
	Min	3.479	3.257	3.203	3.207	3.225	
	Max	3.710	3.455	3.402	3.407	3.765	
	Average	3.568	3.336	3.284	3.287	3.455	
	UnBiased	64	3.589	3.188	3.081	3.053	3.244
65		3.508	3.130	3.013	2.984	3.191	
197		3.594	3.203	3.084	3.049	3.050	
198		3.734	3.320	3.205	3.170	3.171	
318		3.487	3.106	3.000	2.943	2.939	
319		3.563	3.191	3.088	3.054	3.054	
Min		3.487	3.106	3.000	2.943	2.939	
Max		3.734	3.320	3.205	3.170	3.244	
Average		3.579	3.190	3.079	3.042	3.108	



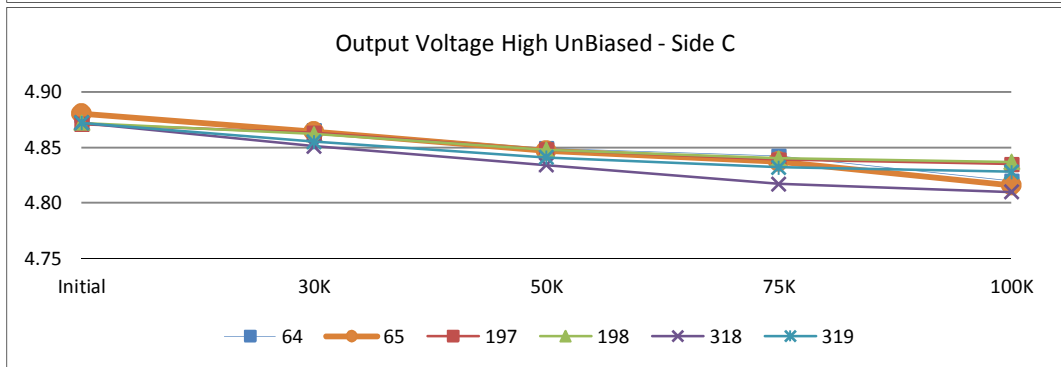
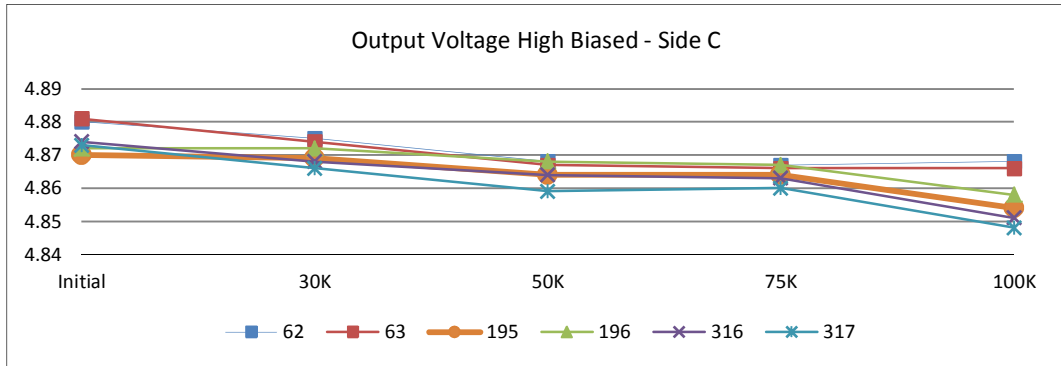
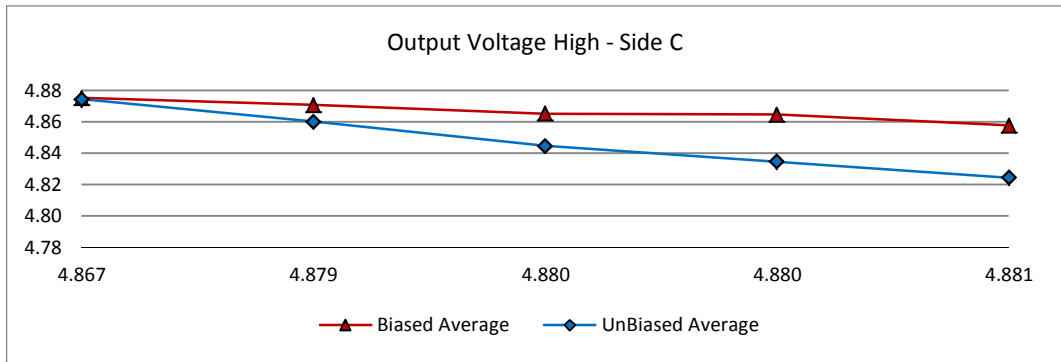
	T# 2	VOH [A] @ VS=+5V, IL=1mA					V
	SN	Initial	30K	50K	75K	100K	25°C
Control	61	4.857	4.873	4.872	4.873	4.875	Limit
	62	4.873	4.880	4.876	4.876	4.876	>4.85
	63	4.874	4.880	4.875	4.874	4.875	
	195	4.863	4.867	4.868	4.868	4.876	
	196	4.867	4.871	4.871	4.870	4.878	
	316	4.869	4.871	4.870	4.869	4.869	
	317	4.868	4.869	4.863	4.865	4.867	
	Min	4.863	4.867	4.863	4.865	4.867	
	Max	4.874	4.880	4.876	4.876	4.878	
	Average	4.869	4.873	4.871	4.870	4.874	
UnBiased	64	4.872	4.872	4.858	4.851	4.833	
	65	4.874	4.872	4.856	4.848	4.829	
	197	4.867	4.869	4.854	4.846	4.842	
	198	4.863	4.868	4.857	4.849	4.847	
	318	4.869	4.861	4.846	4.833	4.829	
	319	4.868	4.863	4.849	4.841	4.838	
	Min	4.863	4.861	4.846	4.833	4.829	
	Max	4.874	4.872	4.858	4.851	4.847	
	Average	4.869	4.868	4.853	4.845	4.836	



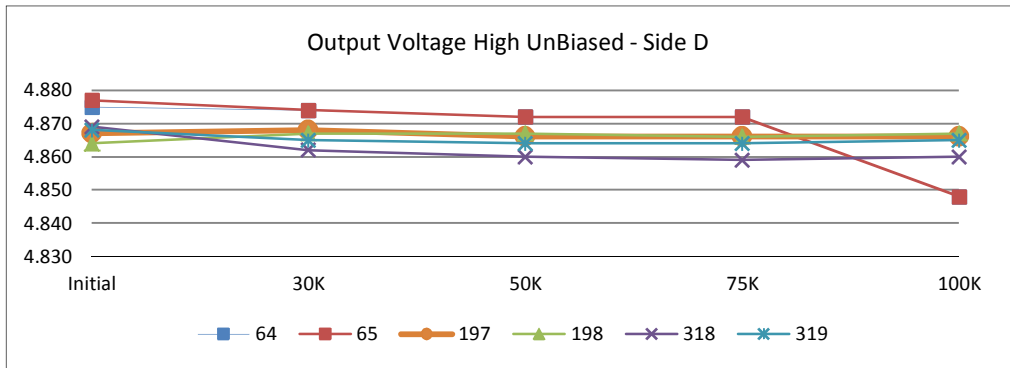
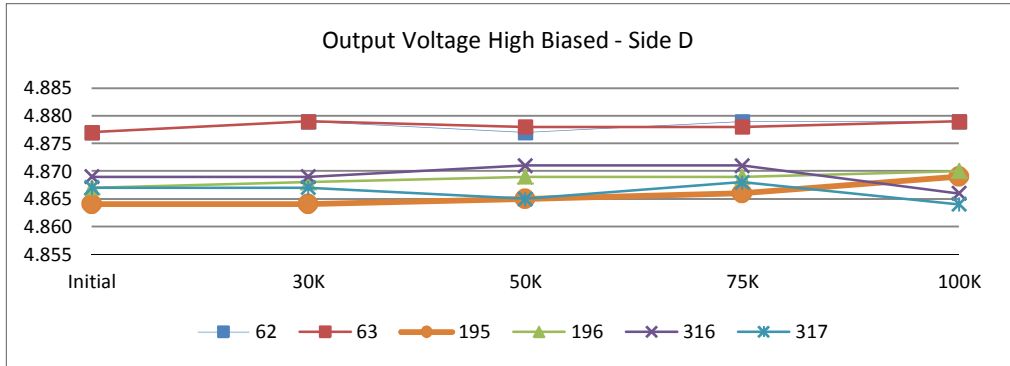
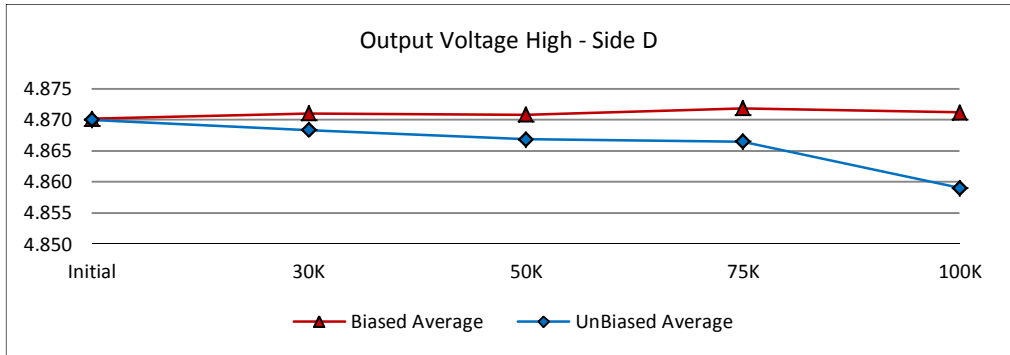
T# 2.1		VOH [B] @ VS=+5V, IL=1MA					V
SN		Initial	30K	50K	75K	100K	25°C
Control	61	4.865	4.878	4.878	4.878	4.879	Limit
	62	4.879	4.879	4.873	4.872	4.873	
	63	4.880	4.878	4.871	4.870	4.870	
	195	4.872	4.870	4.868	4.867	4.864	
	196	4.873	4.873	4.871	4.870	4.869	
	316	4.876	4.872	4.869	4.867	4.866	
	317	4.875	4.869	4.862	4.863	4.860	
	Min	4.872	4.869	4.862	4.863	4.860	
	Max	4.880	4.879	4.873	4.872	4.873	
	Average	4.876	4.874	4.869	4.868	4.867	
UnBiased	64	4.878	4.868	4.855	4.847	4.825	
	65	4.879	4.867	4.851	4.842	4.821	
	197	4.873	4.867	4.852	4.844	4.840	
	198	4.873	4.866	4.853	4.845	4.842	
	318	4.873	4.856	4.840	4.825	4.819	
	319	4.874	4.859	4.844	4.835	4.831	
	Min	4.873	4.856	4.840	4.825	4.819	
	Max	4.879	4.868	4.855	4.847	4.842	
	Average	4.875	4.864	4.849	4.840	4.830	



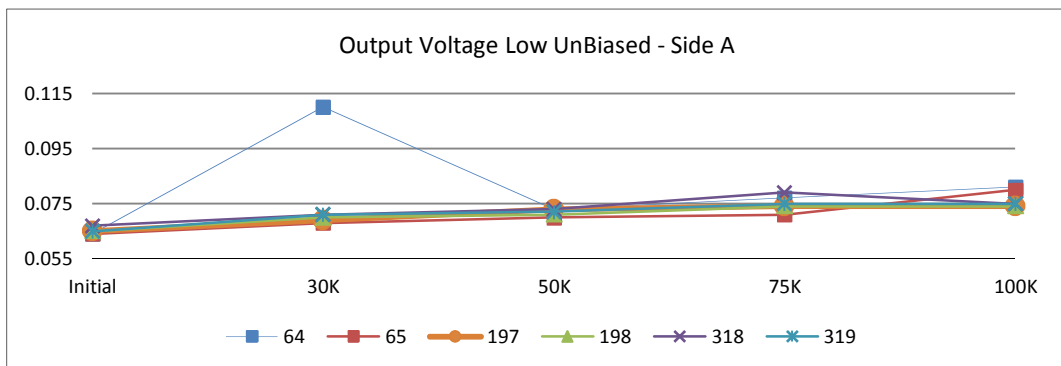
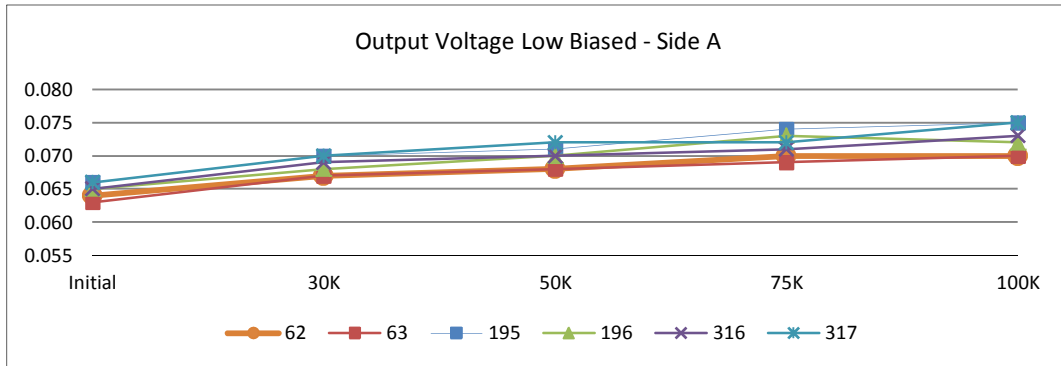
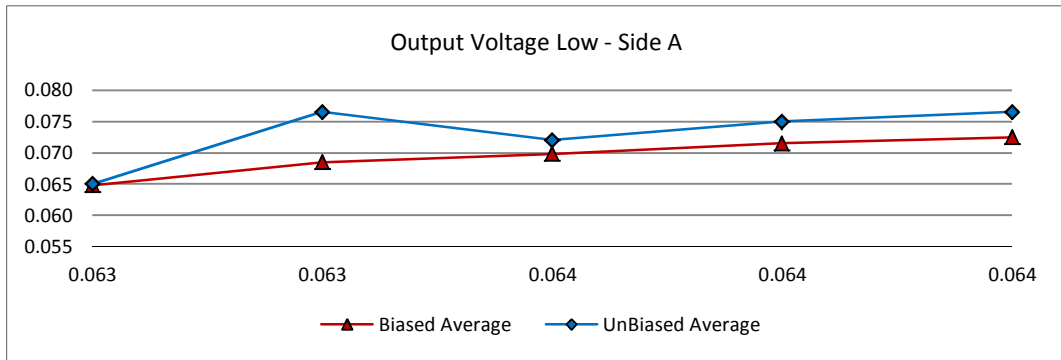
T# 2.2		VOH [C] @ VS=+5V, IL=1MA					V	
SN		Initial	30K	50K	75K	100K	25°C	
Control	61	4.867	4.879	4.880	4.880	4.881	Limit	
	Biased	62	4.880	4.875	4.868	4.867	4.868	
		63	4.881	4.874	4.867	4.866	4.866	
		195	4.870	4.869	4.864	4.864	4.854	
		196	4.872	4.872	4.868	4.867	4.858	
		316	4.874	4.868	4.864	4.863	4.851	
		317	4.873	4.866	4.859	4.860	4.848	
		Min	4.870	4.866	4.859	4.860	4.848	
		Max	4.881	4.875	4.868	4.867	4.868	
		Average	4.875	4.871	4.865	4.865	4.858	
UnBiased	64	4.879	4.865	4.849	4.842	4.820		
	65	4.880	4.864	4.847	4.837	4.816		
	197	4.871	4.863	4.848	4.839	4.835		
	198	4.872	4.862	4.848	4.840	4.837		
	318	4.872	4.851	4.834	4.817	4.810		
	319	4.872	4.855	4.841	4.832	4.828		
	Min	4.871	4.851	4.834	4.817	4.810		
	Max	4.880	4.865	4.849	4.842	4.837		
	Average	4.874	4.860	4.845	4.835	4.824		



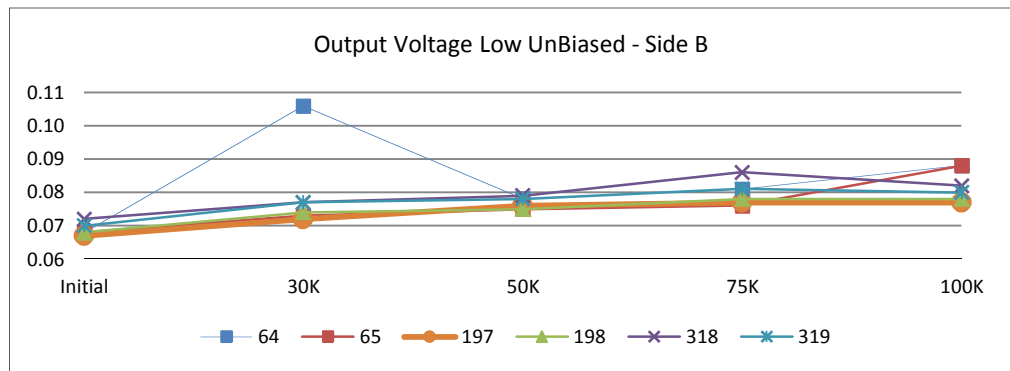
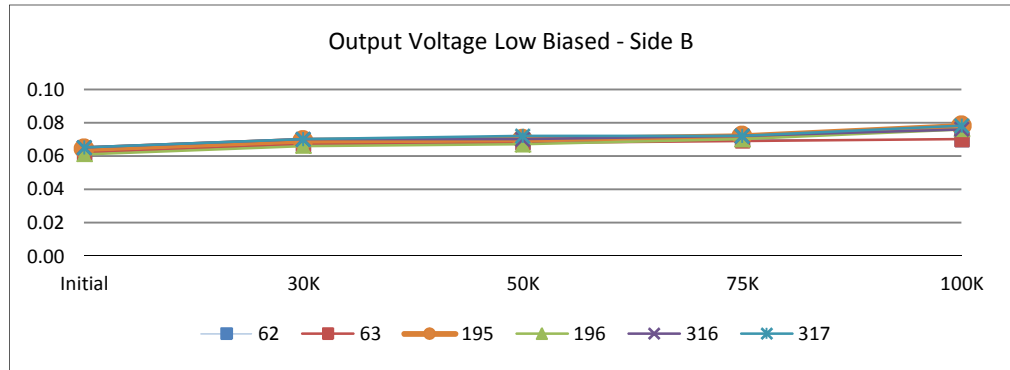
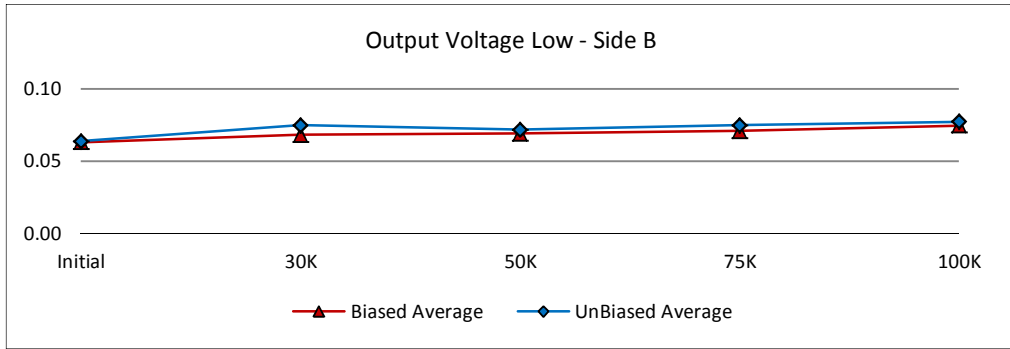
T# 2.3		VOH [D] @ VS=+5V, IL=1MA					V
SN		Initial	30K	50K	75K	100K	25°C
Control	61	4.862	4.876	4.876	4.875	4.878	Limit
	62	4.877	4.879	4.877	4.879	4.879	
	63	4.877	4.879	4.878	4.878	4.879	
	195	4.864	4.864	4.865	4.866	4.869	
	196	4.867	4.868	4.869	4.869	4.870	
	316	4.869	4.869	4.871	4.871	4.866	
	317	4.867	4.867	4.865	4.868	4.864	
	Min	4.864	4.864	4.865	4.866	4.864	
	Max	4.877	4.879	4.878	4.879	4.879	
	Average	4.870	4.871	4.871	4.872	4.871	
UnBiased	64	4.875	4.874	4.872	4.872	4.848	
	65	4.877	4.874	4.872	4.872	4.848	
	197	4.867	4.868	4.866	4.866	4.866	
	198	4.864	4.867	4.867	4.866	4.867	
	318	4.869	4.862	4.860	4.859	4.860	
	319	4.868	4.865	4.864	4.864	4.865	
	Min	4.864	4.862	4.860	4.859	4.848	
	Max	4.877	4.874	4.872	4.872	4.867	
	Average	4.870	4.868	4.867	4.867	4.859	



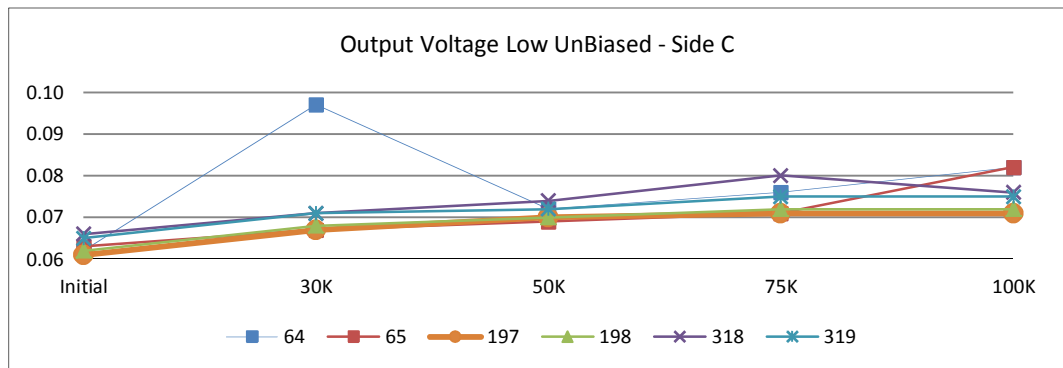
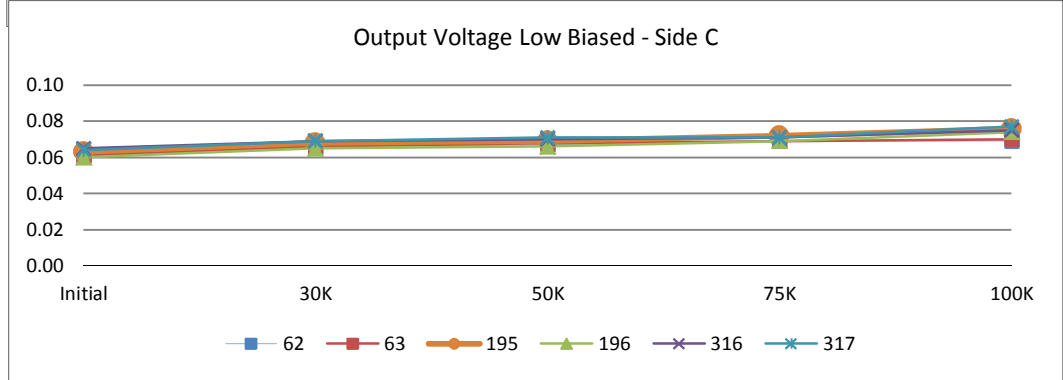
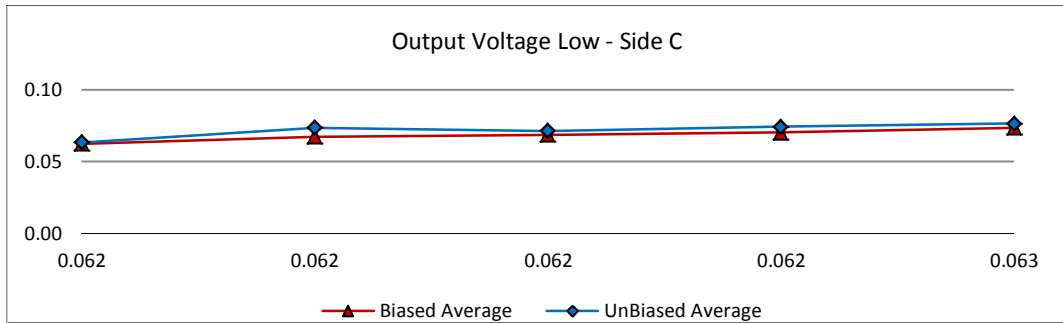
		T# 3	VOL [A]					V
		SN	Initial	30K	50K	75K	100K	25°C
Control	61	0.063	0.063	0.064	0.064	0.064	0.064	Limit
	Biased	62	0.064	0.067	0.068	0.070	0.070	
		63	0.063	0.067	0.068	0.069	0.070	
		195	0.066	0.070	0.071	0.074	0.075	
		196	0.065	0.068	0.070	0.073	0.072	
		316	0.065	0.069	0.070	0.071	0.073	
		317	0.066	0.070	0.072	0.072	0.075	
		Min	0.063	0.067	0.068	0.069	0.070	
		Max	0.066	0.070	0.072	0.074	0.075	
	Average	0.065	0.069	0.070	0.072	0.073		
UnBiased	64	0.064	0.110	0.073	0.077	0.081		
	65	0.064	0.068	0.070	0.071	0.080		
	197	0.065	0.069	0.073	0.074	0.074		
	198	0.065	0.070	0.071	0.074	0.074		
	318	0.067	0.071	0.073	0.079	0.075		
	319	0.065	0.071	0.072	0.075	0.075		
	Min	0.064	0.068	0.070	0.071	0.074		
	Max	0.067	0.110	0.073	0.079	0.081		
	Average	0.065	0.077	0.072	0.075	0.077		



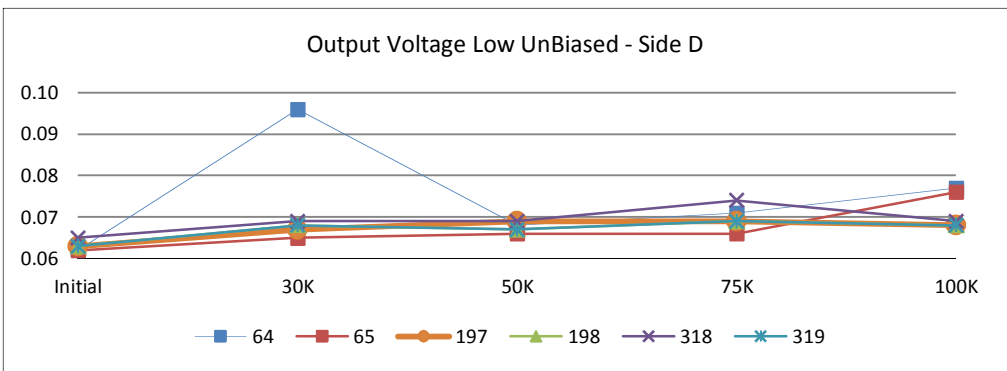
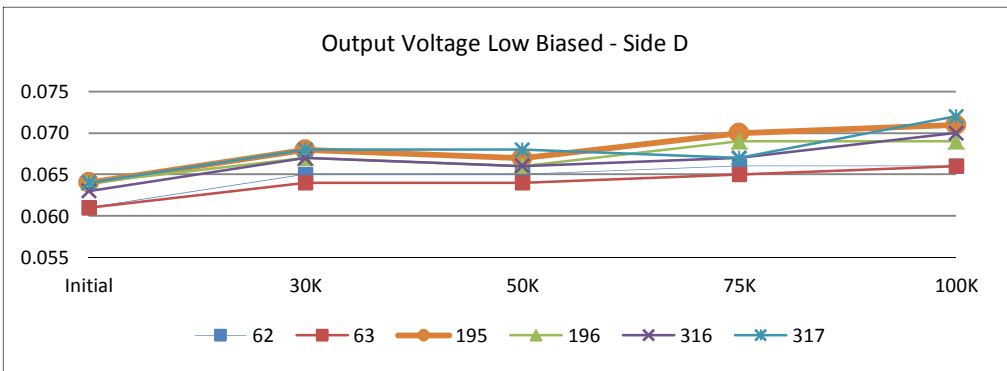
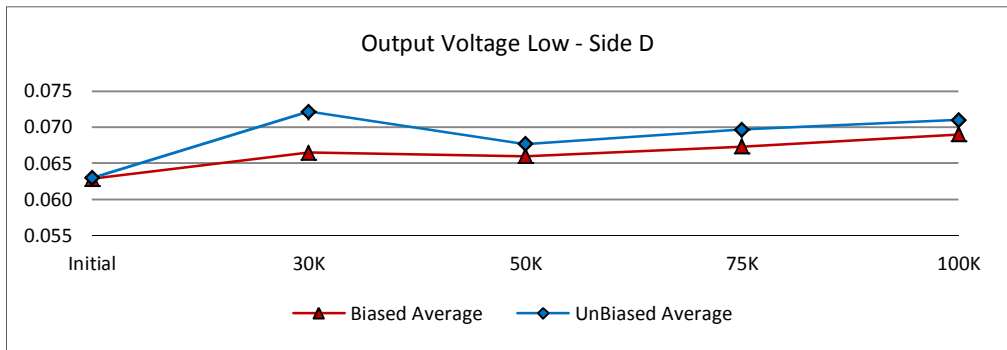
T# 3.1		VOL [B]					V
SN		Initial	30K	50K	75K	100K	25°C
Control	61	0.062	0.063	0.063	0.063	0.064	Limit
Biased	62	0.062	0.067	0.068	0.070	0.070	
	63	0.062	0.067	0.068	0.069	0.070	
	195	0.064	0.069	0.070	0.072	0.078	
	196	0.061	0.066	0.067	0.070	0.076	
	316	0.065	0.070	0.070	0.072	0.076	
	317	0.065	0.070	0.072	0.072	0.078	
	Min	0.061	0.066	0.067	0.069	0.070	
	Max	0.065	0.070	0.072	0.072	0.078	
	Average	0.063	0.068	0.069	0.071	0.075	
UnBiased	64	0.063	0.101	0.073	0.076	0.083	
	65	0.063	0.068	0.070	0.071	0.083	
	197	0.062	0.067	0.071	0.072	0.072	
	198	0.063	0.069	0.070	0.073	0.073	
	318	0.067	0.072	0.074	0.081	0.077	
	319	0.065	0.072	0.073	0.076	0.075	
	Min	0.062	0.067	0.070	0.071	0.072	
	Max	0.067	0.101	0.074	0.081	0.083	
	Average	0.064	0.075	0.072	0.075	0.077	



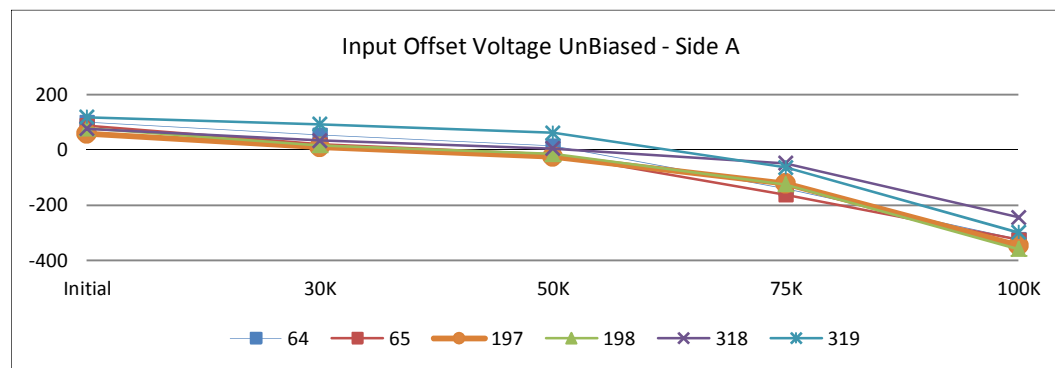
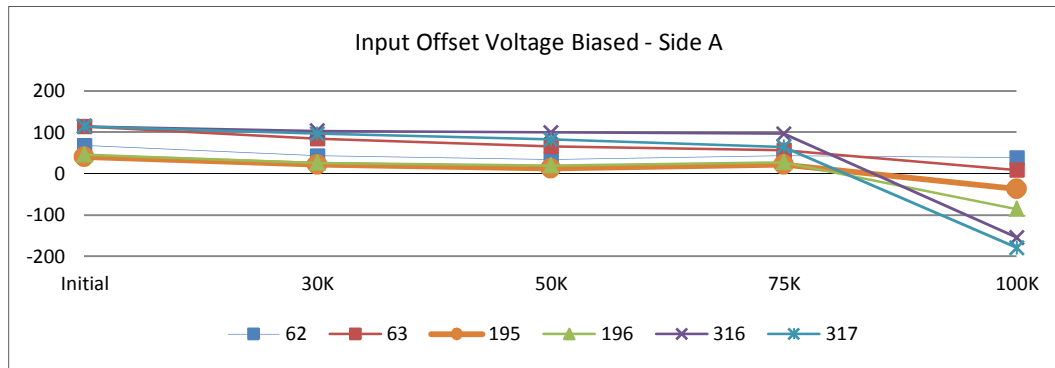
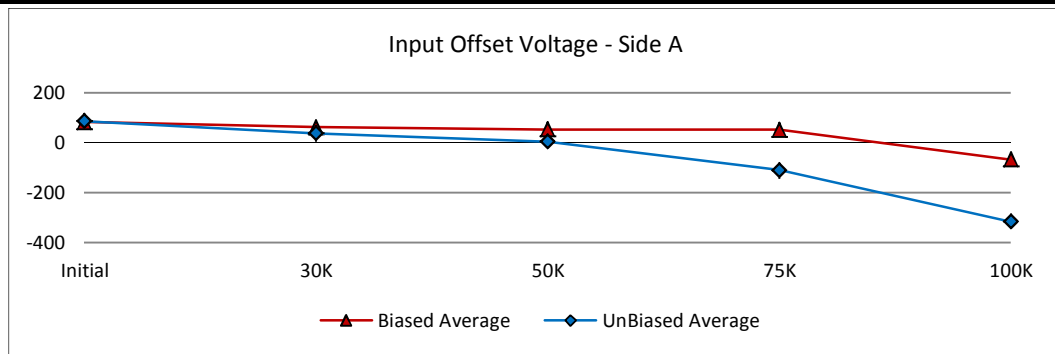
		T# 3.2	VOL [C]					V
		SN	Initial	30K	50K	75K	100K	25°C
Control	61	0.062	0.062	0.062	0.062	0.062	0.063	Limit
	62	0.061	0.066	0.067	0.069	0.069		
	63	0.061	0.066	0.068	0.069	0.070		
	195	0.063	0.068	0.069	0.072	0.076		
	196	0.060	0.065	0.066	0.069	0.074		
	316	0.065	0.069	0.070	0.071	0.075		
	317	0.064	0.069	0.071	0.071	0.077		
	Min	0.060	0.065	0.066	0.069	0.069		
	Max	0.065	0.069	0.071	0.072	0.077		
	Average	0.062	0.067	0.069	0.070	0.074		
UnBiased	64	0.062	0.097	0.072	0.076	0.082		
	65	0.063	0.067	0.069	0.071	0.082		
	197	0.061	0.067	0.070	0.071	0.071		
	198	0.062	0.068	0.070	0.072	0.072		
	318	0.066	0.071	0.074	0.080	0.076		
	319	0.065	0.071	0.072	0.075	0.075		
	Min	0.061	0.067	0.069	0.071	0.071		
	Max	0.066	0.097	0.074	0.080	0.082		
	Average	0.063	0.074	0.071	0.074	0.076		



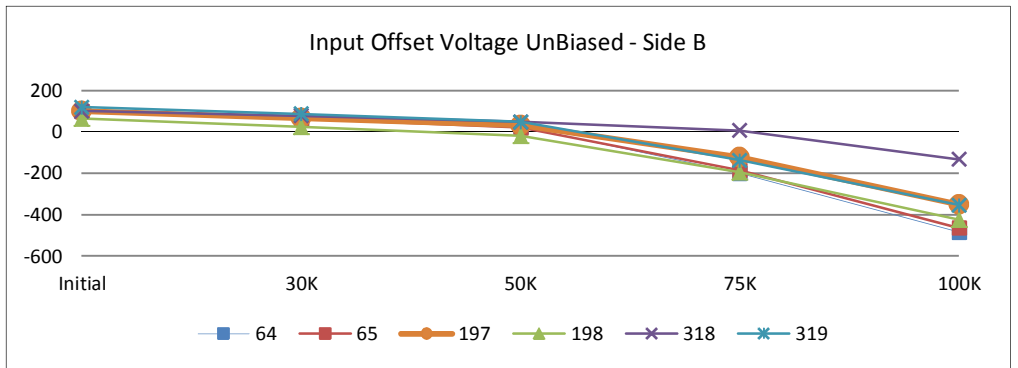
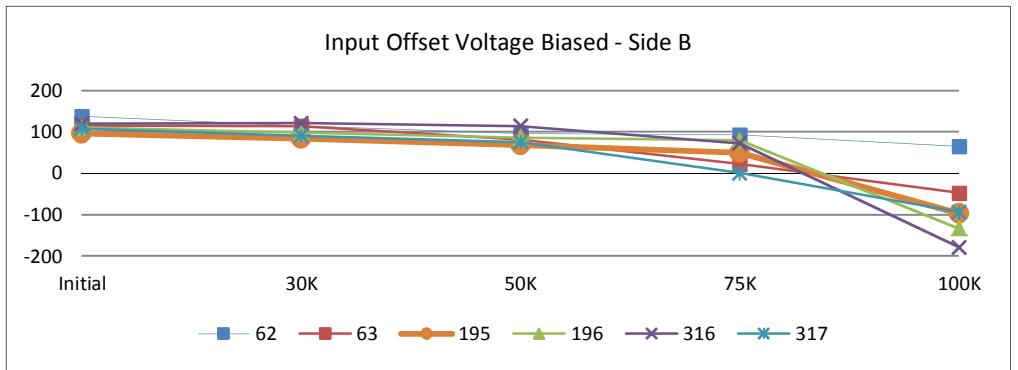
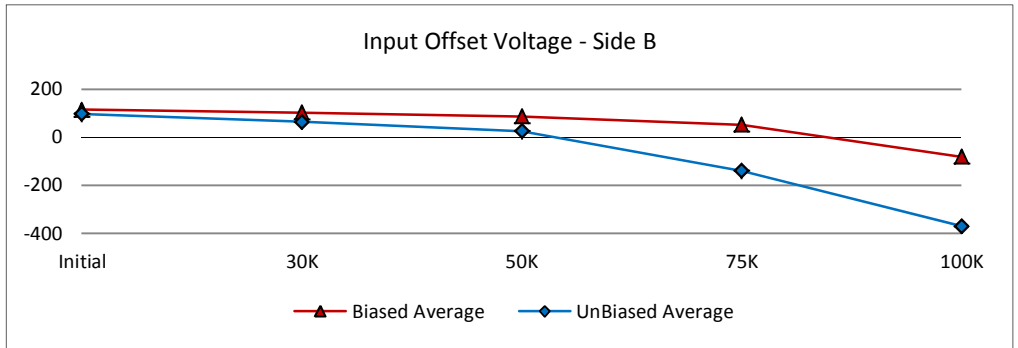
T# 3.3		VOL [D]					V
SN		Initial	30K	50K	75K	100K	25°C
Control	61	0.061	0.062	0.062	0.064	0.063	Limit
	62	0.061	0.065	0.065	0.066	0.066	
	63	0.061	0.064	0.064	0.065	0.066	
	195	0.064	0.068	0.067	0.070	0.071	
	196	0.064	0.067	0.066	0.069	0.069	
	316	0.063	0.067	0.066	0.067	0.070	
	317	0.064	0.068	0.068	0.067	0.072	
	Min	0.061	0.064	0.064	0.065	0.066	
	Max	0.064	0.068	0.068	0.070	0.072	
	Average	0.063	0.067	0.066	0.067	0.069	
UnBiased	64	0.062	0.096	0.068	0.071	0.077	
	65	0.062	0.065	0.066	0.066	0.076	
	197	0.063	0.067	0.069	0.069	0.068	
	198	0.063	0.068	0.067	0.069	0.068	
	318	0.065	0.069	0.069	0.074	0.069	
	319	0.063	0.068	0.067	0.069	0.068	
	Min	0.062	0.065	0.066	0.066	0.068	
	Max	0.065	0.096	0.069	0.074	0.077	
	Average	0.063	0.072	0.068	0.070	0.071	



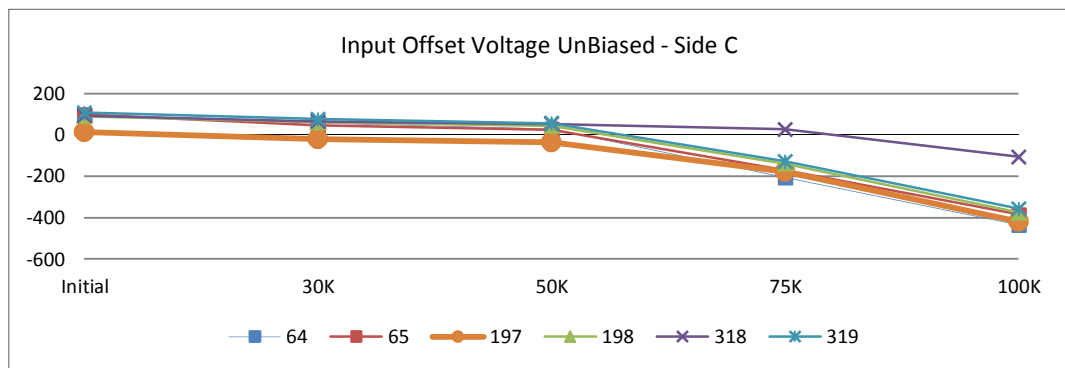
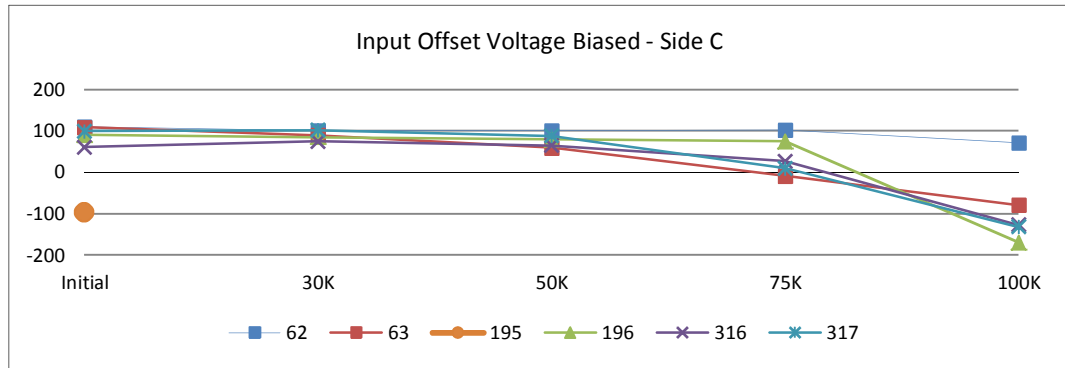
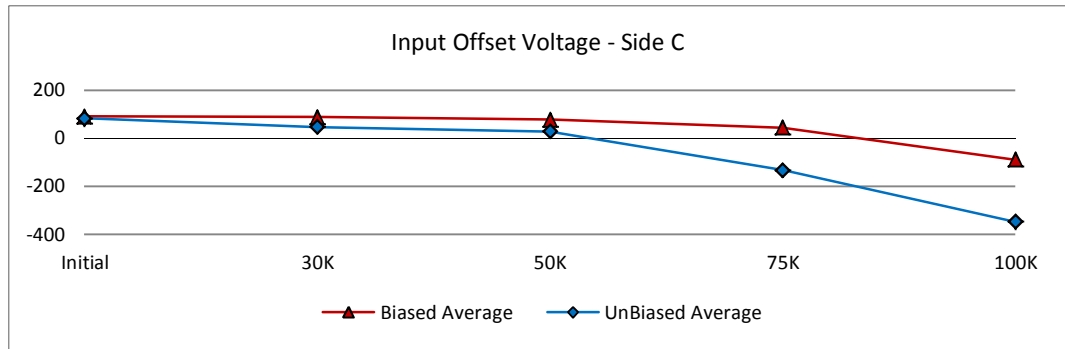
T# 4		VOS [A] @ VS=+-2.5V					uV
Control	SN	Initial	30K	50K	75K	100K	Limit
Biased	61	103.200	104.600	103.500	104.200	101.700	<600
	62	68.700	43.700	33.900	43.900	39.000	
	63	113.700	84.400	65.700	57.100	8.500	
	195	39.900	21.200	12.200	21.100	-36.500	
	196	45.600	25.700	19.800	27.600	-85.700	
	316	114.300	102.900	99.500	96.000	-154.400	
	317	113.700	95.900	82.500	64.700	-178.800	
	Min	39.900	21.200	12.200	21.100	-178.800	
	Max	114.300	102.900	99.500	96.000	39.000	
Average	82.650	62.300	52.267	51.733	-67.983		
UnBiased	64	99.100	53.600	13.200	-140.400	-322.100	
	65	87.900	19.700	-17.600	-162.000	-325.300	
	197	57.800	9.500	-25.000	-121.300	-347.200	
	198	77.500	16.100	-15.000	-124.400	-358.700	
	318	76.700	33.200	4.300	-48.900	-244.200	
	319	118.300	92.600	61.400	-64.000	-298.300	
	Min	57.800	9.500	-25.000	-162.000	-358.700	
	Max	118.300	92.600	61.400	-48.900	-244.200	
	Average	86.217	37.450	3.550	-110.167	-315.967	



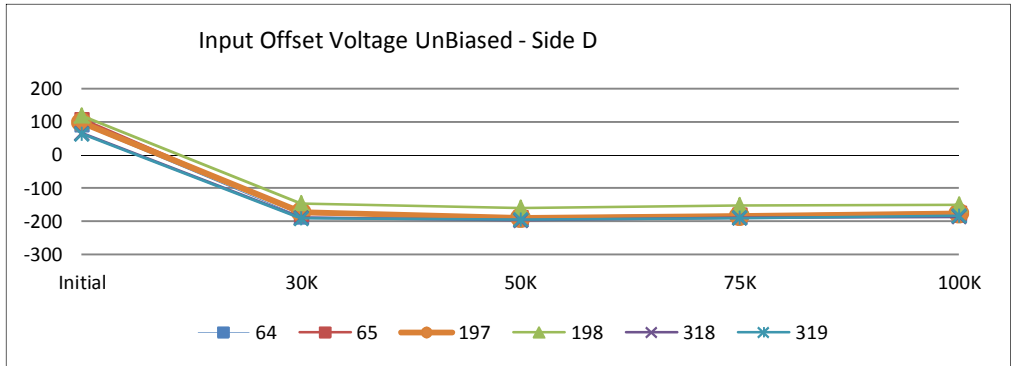
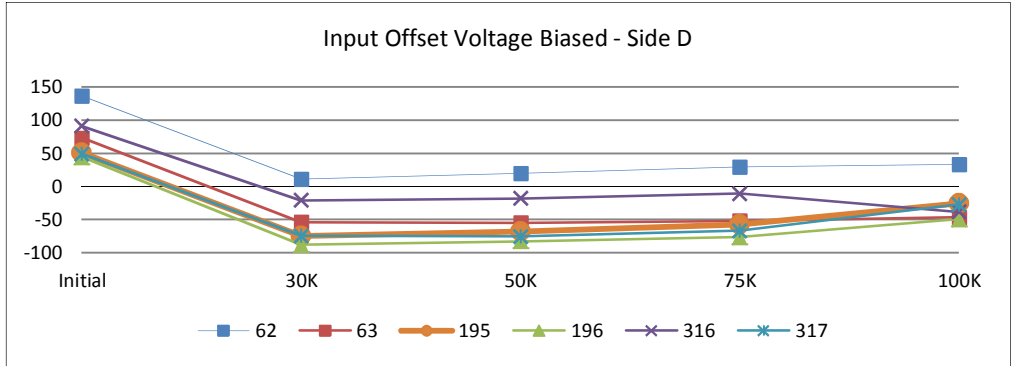
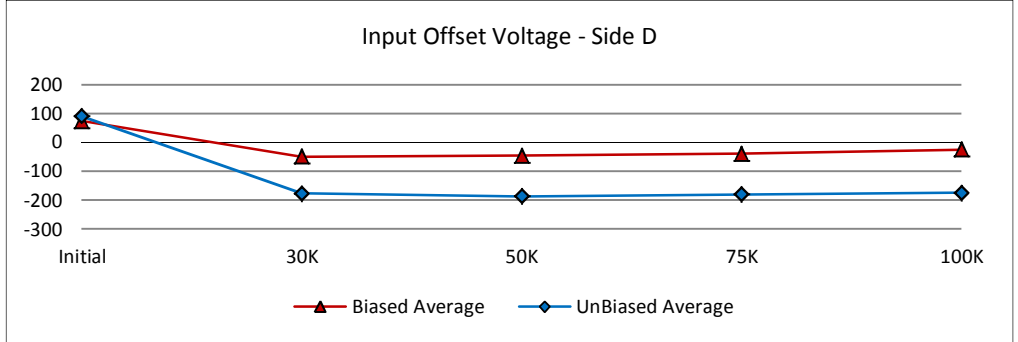
T# 4.1		VOS [B] @ VS=+-2.5V					uV
Control	SN	Initial	30K	50K	75K	100K	Limit
Biased	61	109.200	107.900	109.600	109.400	107.100	<600
	62	138.200	114.200	96.300	92.200	64.400	
	63	114.800	113.300	81.900	21.600	-47.600	
	195	96.400	82.800	68.300	50.100	-97.400	
	196	110.400	97.600	86.300	79.600	-133.500	
	316	119.300	121.100	114.300	72.000	-179.300	
	317	108.200	90.900	75.000	0.200	-93.900	
	Min	96.400	82.800	68.300	0.200	-179.300	
	Max	138.200	121.100	114.300	92.200	64.400	
	Average	114.550	103.317	87.017	52.617	-81.217	
UnBiased	64	100.900	67.400	25.900	-199.500	-484.800	
	65	99.500	63.800	20.600	-185.700	-464.500	
	197	98.700	65.000	32.300	-124.000	-351.400	
	198	63.900	23.300	-20.200	-195.600	-424.800	
	318	101.200	77.500	47.400	7.100	-132.800	
	319	119.600	87.300	48.800	-137.500	-354.500	
	Min	63.900	23.300	-20.200	-199.500	-484.800	
	Max	119.600	87.300	48.800	7.100	-132.800	
	Average	97.300	64.050	25.800	-139.200	-368.800	



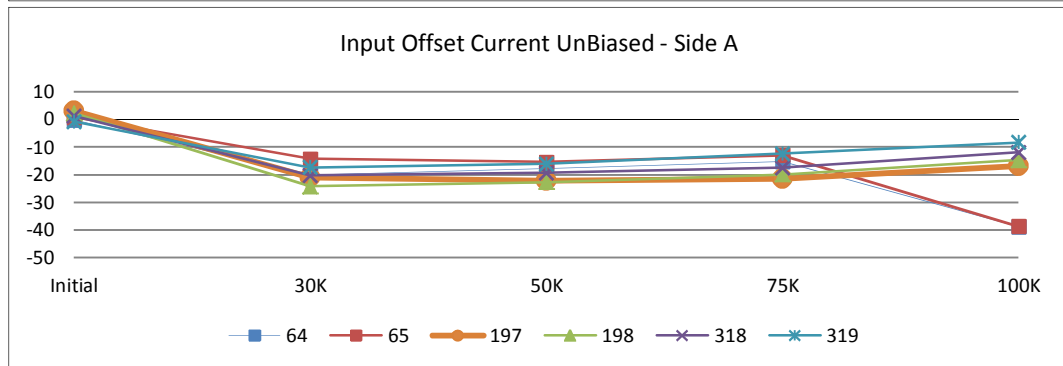
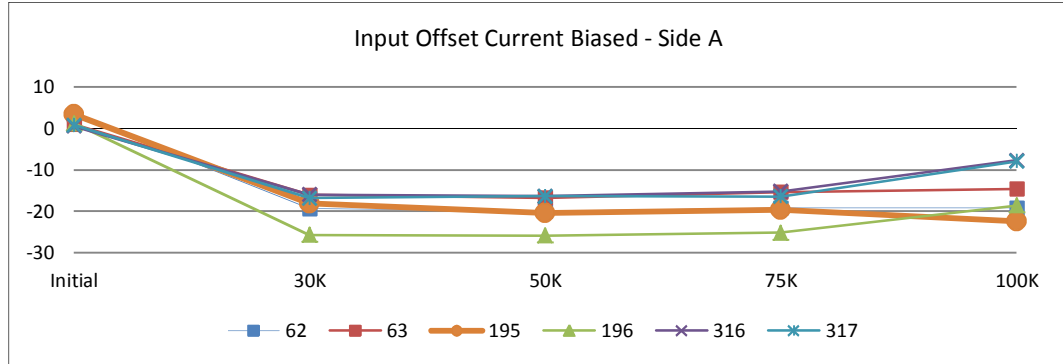
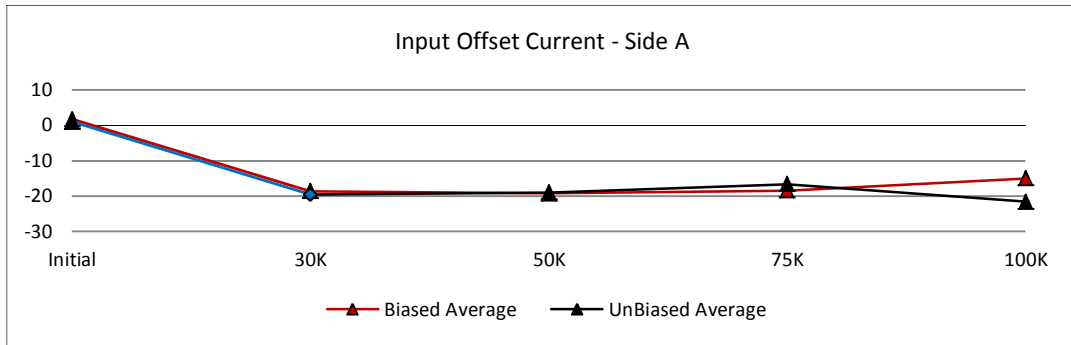
T# 4.2		VOS [C] @ VS=+-2.5V					uV
Control	SN	Initial	30K	50K	75K	100K	Limit
Control	61	99.200	98.400	100.700	97.500	97.800	<600
	62	109.800	101.000	100.500	101.600	71.700	
	63	108.700	88.900	59.000	-9.200	-79.700	
	195	75.700	77.500	74.900	62.800	-96.800	
	196	89.700	85.000	78.900	74.300	-170.200	
	316	60.400	74.300	64.700	26.400	-127.100	
	317	99.000	101.700	88.100	9.800	-132.200	
	Min	60.400	74.300	59.000	-9.200	-170.200	
	Max	109.800	101.700	100.500	101.600	71.700	
Average	90.550	88.067	77.683	44.283	-89.050		
UnBiased	64	95.800	55.500	28.300	-204.800	-436.000	
	65	96.900	47.100	24.300	-170.100	-384.500	
	197	11.800	-20.100	-36.000	-180.000	-421.100	
	198	89.900	59.900	42.800	-139.000	-376.000	
	318	92.800	65.100	52.400	25.800	-106.900	
	319	107.200	75.400	55.700	-127.900	-356.600	
	Min	11.800	-20.100	-36.000	-204.800	-436.000	
	Max	107.200	75.400	55.700	25.800	-106.900	
	Average	82.400	47.150	27.917	-132.667	-346.850	



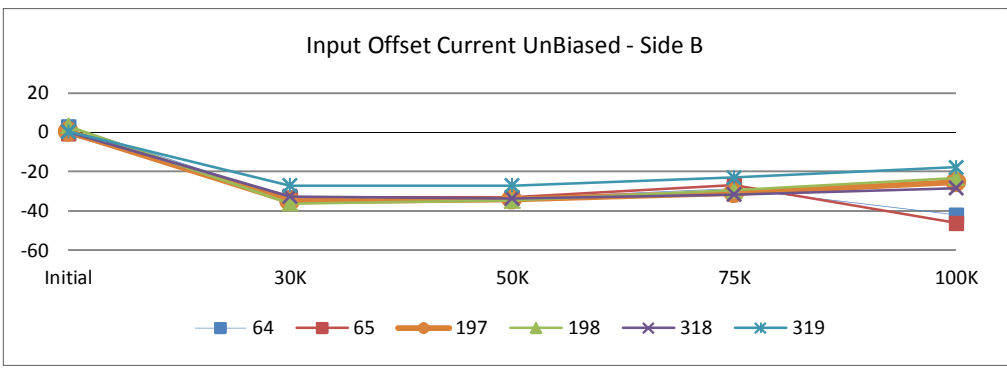
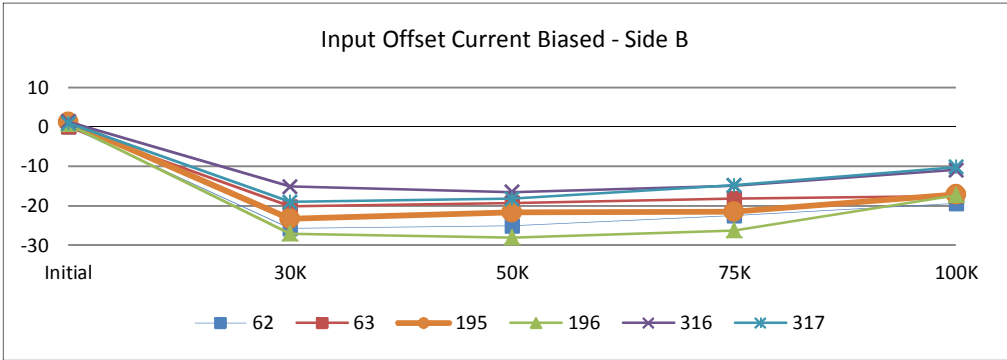
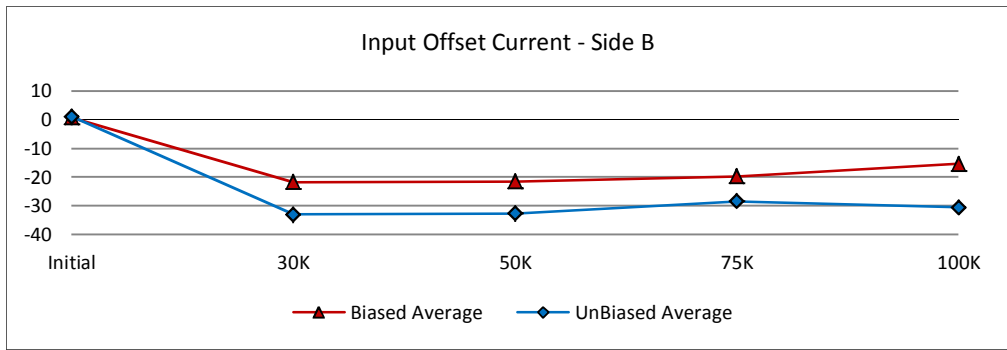
T# 4.3		VOS [D] @ VS=+-2.5V					uV	
SN		Initial	30K	50K	75K	100K	Limit	
Control	61	59.400	59.600	60.200	60.500	58.400	<600	
	62	136.300	11.400	19.700	29.100	33.300		
Biased	63	72.900	-53.500	-54.500	-51.800	-46.600		
	195	50.700	-74.700	-67.500	-57.600	-25.600		
	196	43.900	-87.800	-82.400	-76.100	-49.200		
	316	90.900	-20.800	-17.900	-10.700	-38.300		
	317	48.700	-74.400	-75.300	-66.900	-27.100		
	Min	43.900	-87.800	-82.400	-76.100	-49.200		
	Max	136.300	11.400	19.700	29.100	33.300		
	Average	73.900	-49.967	-46.317	-39.000	-25.583		
	UnBiased	64	91.700	-186.000	-192.500	-186.300	-179.400	
		65	107.700	-177.400	-187.600	-180.400	-173.200	
197		97.800	-172.000	-189.100	-184.300	-176.800		
198		118.300	-145.700	-158.800	-151.100	-149.700		
318		64.600	-188.900	-196.700	-189.000	-185.700		
319		63.000	-191.300	-194.800	-189.600	-183.300		
Min		63.000	-191.300	-196.700	-189.600	-185.700		
Max		118.300	-145.700	-158.800	-151.100	-149.700		
Average		90.517	-176.883	-186.583	-180.117	-174.683		



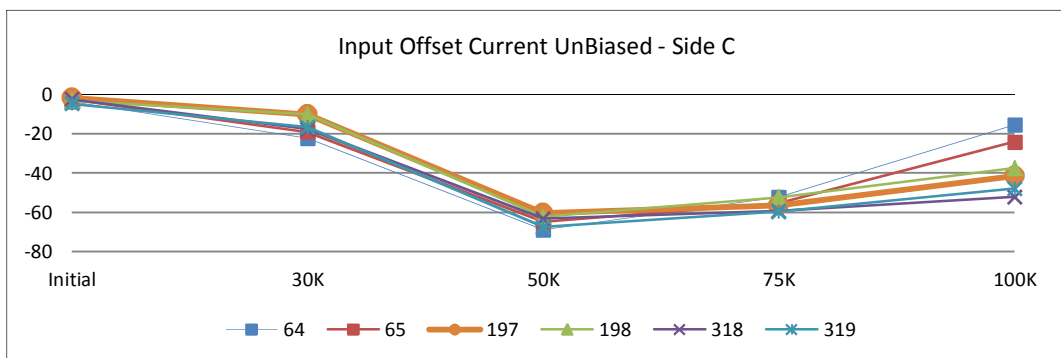
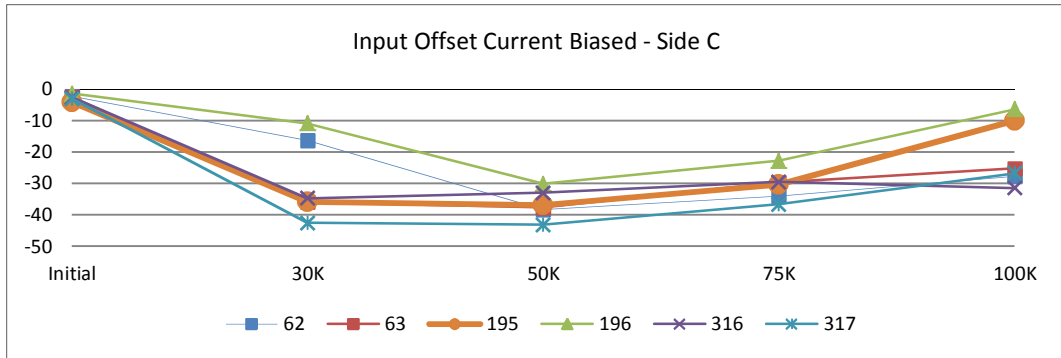
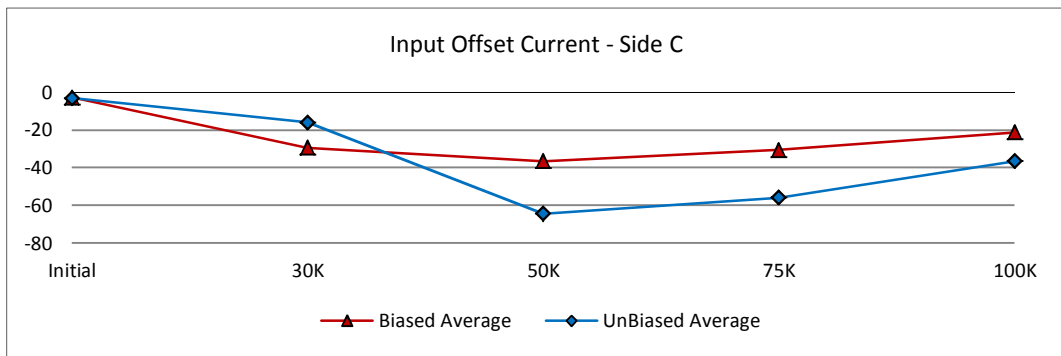
T# 5		IOS [A]					nA	
SN		Initial	30K	50K	75K	100K	Limit	
Control	61	2.280	2.320	2.310	2.230	2.240	<400	
	Biased	62	3.130	-19.300	-19.900	-19.110	-19.150	
		63	1.010	-16.040	-16.710	-15.370	-14.540	
		195	3.340	-18.110	-20.330	-19.610	-22.320	
		196	1.240	-25.690	-25.840	-25.130	-18.620	
		316	0.550	-15.970	-16.330	-15.180	-7.690	
		317	0.710	-16.800	-16.320	-16.420	-7.950	
		Min	0.550	-25.690	-25.840	-25.130	-22.320	
		Max	3.340	-15.970	-16.320	-15.180	-7.690	
		Average	1.663	-18.652	-19.238	-18.470	-15.045	
UnBiased	64	-0.250	-20.070	-17.860	-15.370	-38.860		
	65	0.720	-14.270	-15.420	-13.020	-38.700		
	197	2.900	-21.040	-22.240	-21.520	-16.890		
	198	2.140	-24.250	-22.740	-19.950	-14.730		
	318	1.230	-20.310	-19.360	-17.510	-12.010		
	319	-0.860	-17.370	-16.180	-12.400	-8.360		
	Min	-0.860	-24.250	-22.740	-21.520	-38.860		
	Max	2.900	-14.270	-15.420	-12.400	-8.360		
	Average	0.980	-19.552	-18.967	-16.628	-21.592		



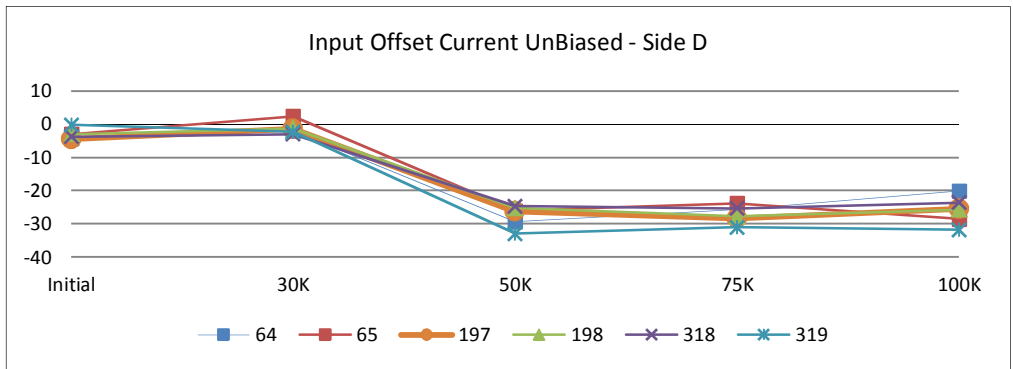
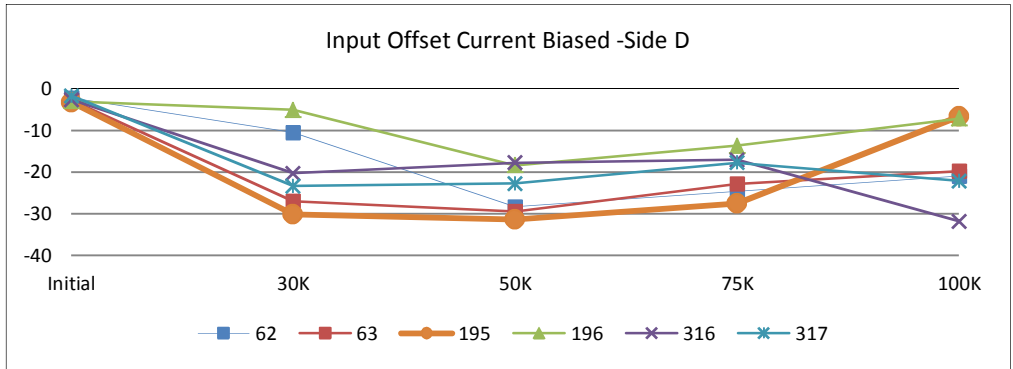
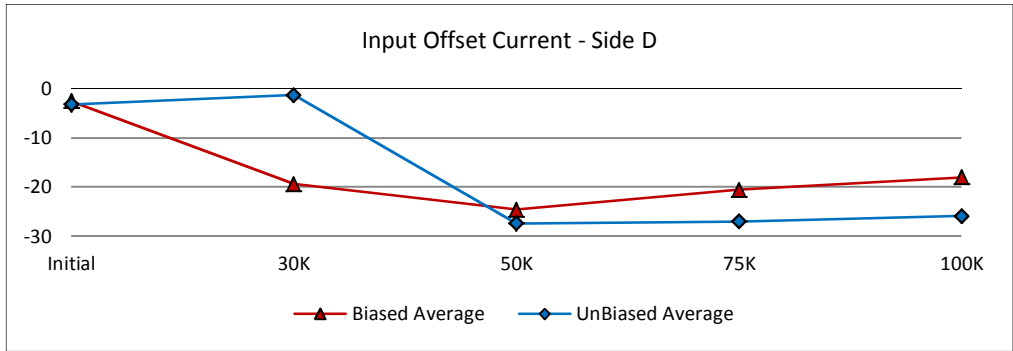
	T# 5.1	IOS [B]					nA
	SN	Initial	30K	50K	75K	100K	Limit
Control	61	1.450	1.510	1.560	1.590	1.530	<400
Biased	62	0.040	-25.720	-25.100	-22.560	-19.390	
	63	0.040	-20.140	-19.260	-18.120	-17.480	
	195	1.190	-23.280	-21.700	-21.570	-17.150	
	196	0.670	-27.050	-28.060	-26.240	-17.350	
	316	1.330	-15.150	-16.540	-14.900	-10.970	
	317	0.920	-19.080	-18.260	-14.850	-10.170	
	Min	0.040	-27.050	-28.060	-26.240	-19.390	
	Max	1.330	-15.150	-16.540	-14.850	-10.170	
	Average	0.698	-21.737	-21.487	-19.707	-15.418	
UnBiased	64	2.950	-33.490	-33.580	-28.540	-41.980	
	65	-0.720	-33.180	-33.070	-26.740	-46.130	
	197	0.310	-35.030	-34.150	-30.890	-25.510	
	198	3.250	-36.200	-34.760	-29.600	-23.230	
	318	0.310	-32.660	-33.570	-31.660	-28.430	
	319	0.360	-27.030	-27.010	-22.950	-17.880	
	Min	-0.720	-36.200	-34.760	-31.660	-46.130	
	Max	3.250	-27.030	-27.010	-22.950	-17.880	
	Average	1.077	-32.932	-32.690	-28.397	-30.527	



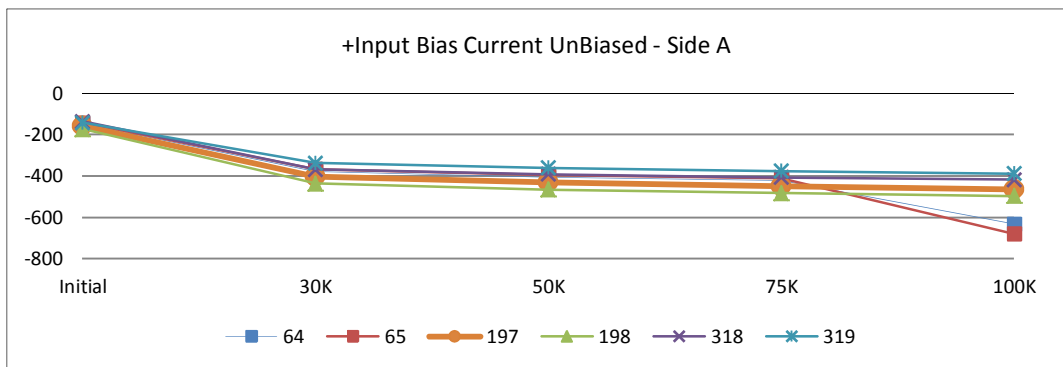
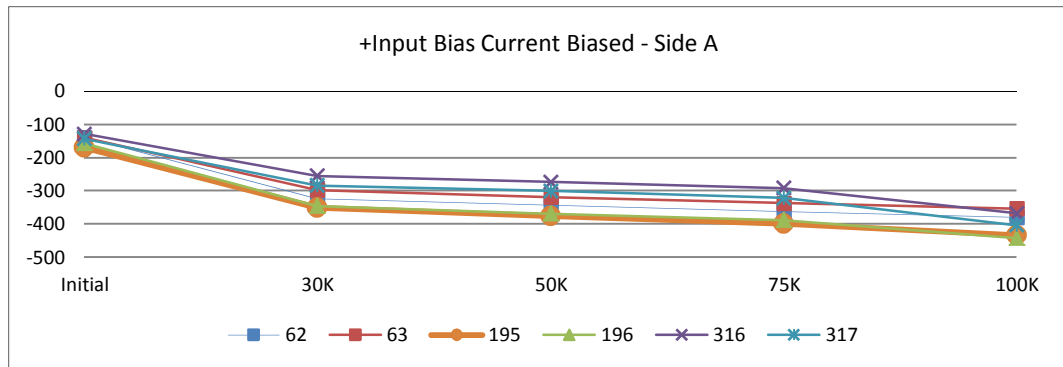
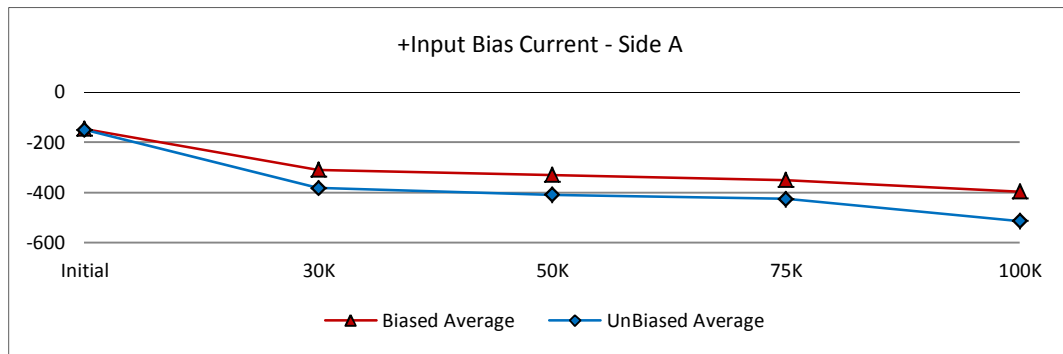
T# 5.2		IOS [C]					nA	
SN		Initial	30K	50K	75K	100K	Limit	
Control	61	-2.650	-2.510	-2.630	-2.320	-2.520	<400	
	Biased	62	-2.360	-16.270	-38.420	-34.030	-27.780	
		63	-2.580	-35.930	-37.630	-29.780	-25.260	
		195	-4.130	-35.930	-37.000	-30.330	-10.010	
		196	-1.430	-10.880	-30.120	-22.770	-6.450	
		316	-2.620	-34.720	-33.010	-29.550	-31.490	
		317	-3.110	-42.540	-43.160	-36.670	-26.800	
		Min	-4.130	-42.540	-43.160	-36.670	-31.490	
		Max	-1.430	-10.880	-30.120	-22.770	-6.450	
		Average	-2.705	-29.378	-36.557	-30.522	-21.298	
UnBiased	64	-3.550	-22.210	-68.850	-52.330	-15.510		
	65	-2.600	-19.070	-64.740	-55.290	-24.140		
	197	-1.660	-10.320	-60.330	-56.490	-41.560		
	198	-3.160	-10.200	-62.210	-52.340	-37.520		
	318	-2.520	-17.660	-63.150	-59.320	-52.200		
	319	-4.680	-16.580	-67.390	-59.700	-47.970		
	Min	-4.680	-22.210	-68.850	-59.700	-52.200		
	Max	-1.660	-10.200	-60.330	-52.330	-15.510		
	Average	-3.028	-16.007	-64.445	-55.912	-36.483		



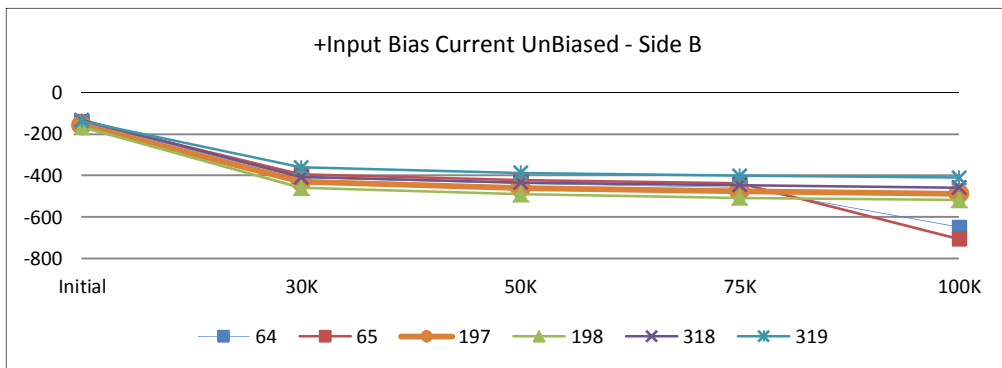
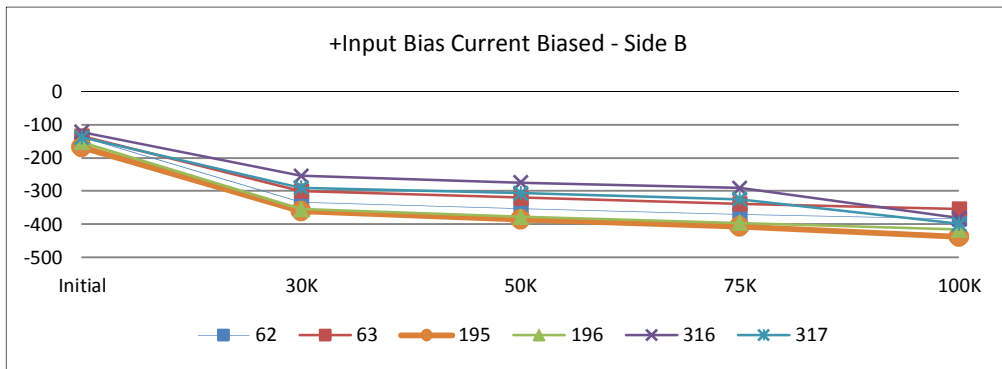
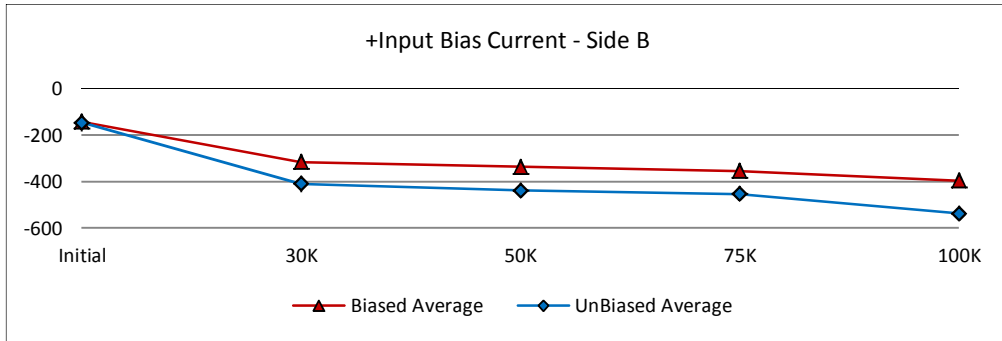
T# 5.3		IOS [D]					nA	
SN		Initial	30K	50K	75K	100K	Limit	
Control	61	-1.950	-2.060	-2.060	-1.910	-2.050	<400	
	Biased	62	-2.210	-10.520	-28.260	-24.670	-20.950	
		63	-2.750	-26.980	-29.380	-22.780	-19.760	
		195	-3.220	-30.110	-31.350	-27.530	-6.600	
		196	-3.020	-5.050	-18.360	-13.710	-7.120	
		316	-2.590	-20.270	-17.740	-17.050	-31.810	
		317	-1.680	-23.340	-22.710	-17.760	-22.130	
		Min	-3.220	-30.110	-31.350	-27.530	-31.810	
		Max	-1.680	-5.050	-17.740	-13.710	-6.600	
		Average	-2.578	-19.378	-24.633	-20.583	-18.062	
UnBiased	64	-4.400	-2.040	-29.270	-25.740	-20.070		
	65	-3.050	2.340	-26.050	-23.780	-28.570		
	197	-4.500	-1.450	-26.330	-28.440	-25.480		
	198	-3.020	-1.260	-25.280	-27.740	-25.730		
	318	-3.760	-3.030	-24.700	-25.340	-23.630		
	319	-0.270	-2.380	-32.940	-31.050	-31.830		
	Min	-4.500	-3.030	-32.940	-31.050	-31.830		
	Max	-0.270	2.340	-24.700	-23.780	-20.070		
	Average	-3.167	-1.303	-27.428	-27.015	-25.885		



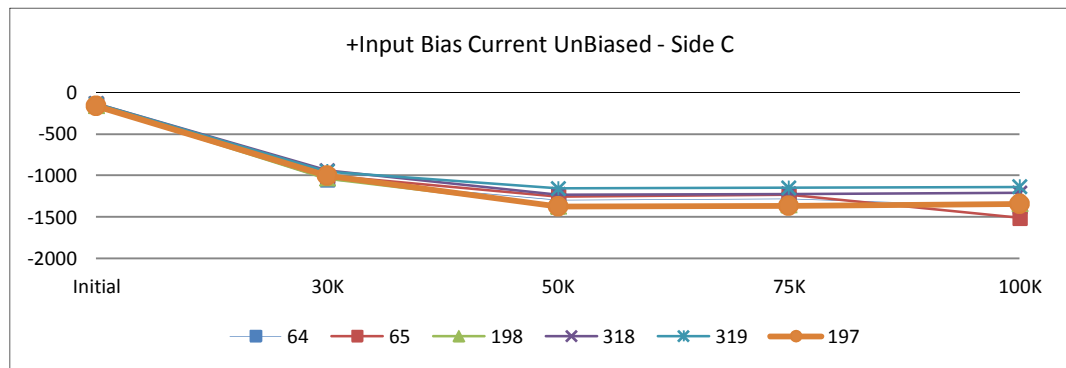
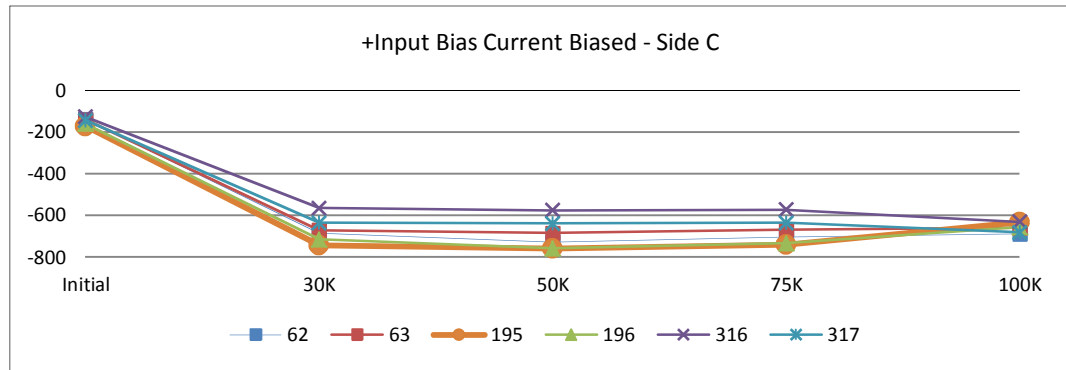
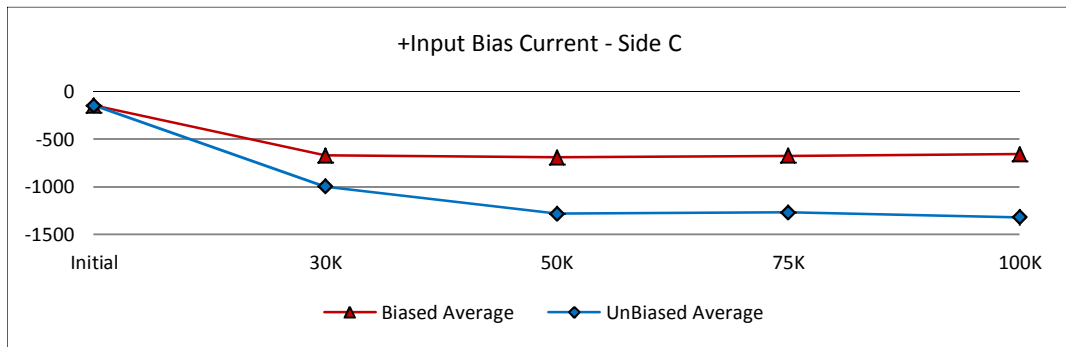
	T# 6	IB+ [A]					nA
	SN	Initial	30K	50K	75K	100K	Limit
Control	61	-145.690	-145.920	-146.460	-146.330	-146.370	<3000
Biased	62	-139.520	-323.850	-344.300	-363.450	-379.560	
	63	-140.460	-297.450	-318.710	-337.380	-353.390	
	195	-170.030	-350.380	-375.850	-398.740	-433.870	
	196	-157.180	-346.060	-368.720	-388.370	-441.790	
	316	-129.020	-254.940	-273.720	-291.620	-367.730	
	317	-143.680	-284.380	-301.000	-321.450	-403.440	
	Min	-170.030	-350.380	-375.850	-398.740	-441.790	
	Max	-129.020	-254.940	-273.720	-291.620	-353.390	
	Average	-146.648	-309.510	-330.383	-350.168	-396.630	
UnBiased	64	-145.820	-378.330	-406.460	-423.250	-632.780	
	65	-142.700	-367.010	-395.020	-411.760	-679.530	
	197	-160.310	-402.960	-432.390	-450.700	-464.040	
	198	-173.220	-436.460	-465.720	-482.450	-497.550	
	318	-137.030	-368.630	-391.290	-407.030	-417.920	
	319	-142.550	-338.020	-361.270	-376.840	-388.870	
	Min	-173.220	-436.460	-465.720	-482.450	-679.530	
	Max	-137.030	-368.630	-391.290	-407.030	-417.920	
	Average	-150.272	-381.902	-408.692	-425.338	-513.448	



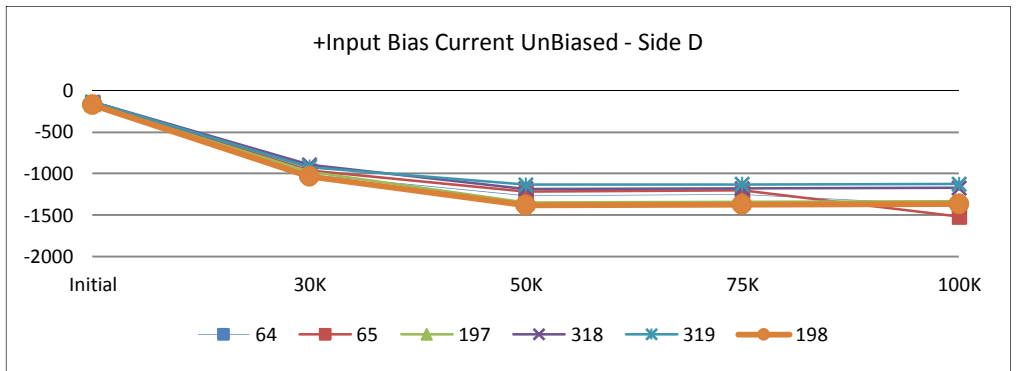
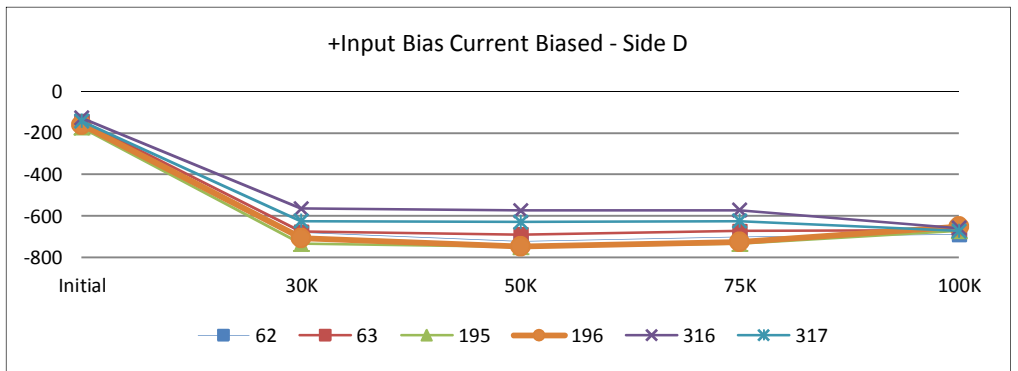
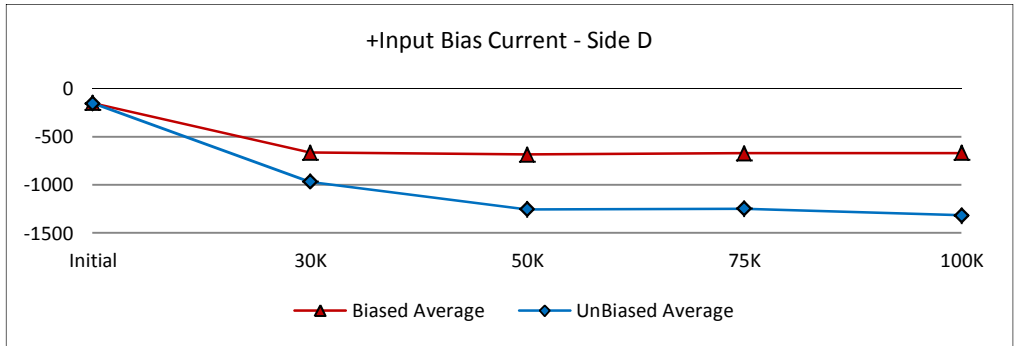
T# 6.1		IB+ [B]					nA	
SN		Initial	30K	50K	75K	100K	Limit	
Control	61	-144.550	-144.610	-145.120	-145.060	-145.060	<3000	
	Biased	62	-136.920	-333.640	-353.090	-370.260	-383.020	
		63	-134.270	-300.090	-319.920	-338.610	-353.710	
		195	-168.010	-361.560	-386.090	-407.380	-438.490	
		196	-153.600	-354.680	-377.560	-395.820	-416.080	
		316	-122.290	-254.710	-274.240	-291.000	-381.480	
		317	-139.160	-289.780	-306.310	-325.160	-399.040	
		Min	-168.010	-361.560	-386.090	-407.380	-438.490	
		Max	-122.290	-254.710	-274.240	-291.000	-353.710	
		Average	-142.375	-315.743	-336.202	-354.705	-395.303	
UnBiased	64	-142.760	-409.410	-439.190	-455.960	-649.470		
	65	-138.740	-393.570	-422.290	-436.040	-704.210		
	197	-157.240	-430.690	-459.820	-476.920	-489.130		
	198	-166.140	-460.070	-490.290	-507.080	-517.700		
	318	-132.240	-406.610	-432.510	-446.310	-457.140		
	319	-136.960	-360.340	-386.350	-401.090	-410.410		
	Min	-166.140	-460.070	-490.290	-507.080	-704.210		
	Max	-132.240	-360.340	-386.350	-401.090	-410.410		
	Average	-145.680	-410.115	-438.408	-453.900	-538.010		



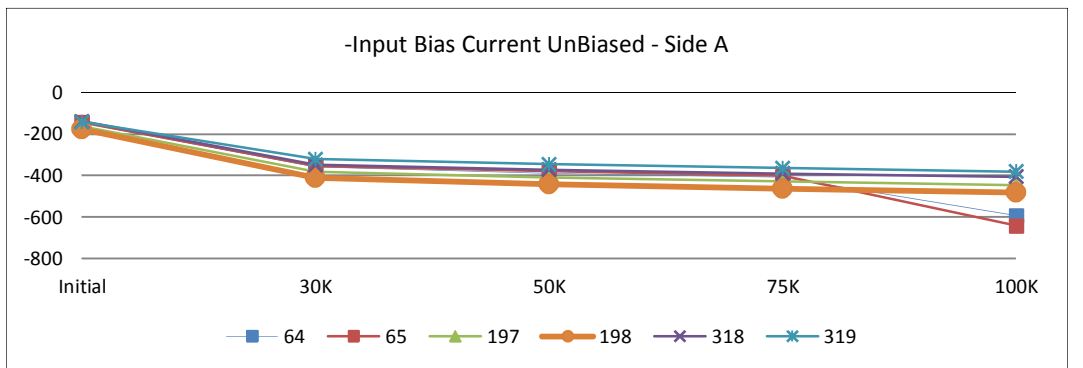
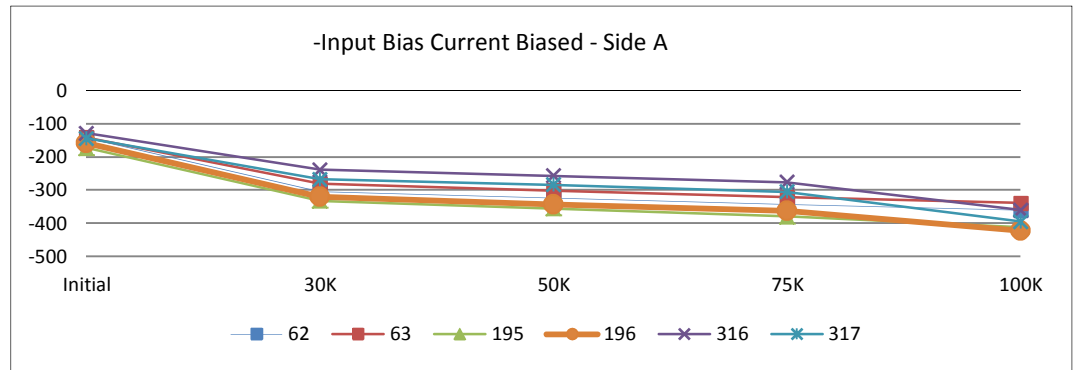
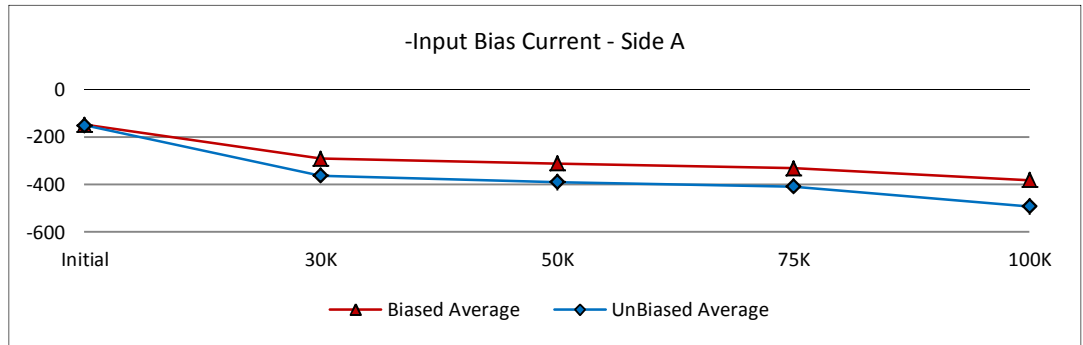
		T# 6.2	IB+ [C]					nA
		SN	Initial	30K	50K	75K	100K	Limit
Control	61	-149.600	-149.800	-150.380	-150.070	-150.200	<3000	
	Biased	62	-139.500	-687.060	-728.880	-703.380	-690.120	
		63	-141.220	-670.830	-684.590	-667.630	-660.420	
		195	-173.650	-742.920	-757.780	-741.760	-632.070	
		196	-161.180	-716.000	-759.260	-734.410	-657.310	
		316	-128.000	-565.590	-575.620	-572.750	-631.090	
		317	-144.750	-635.390	-639.560	-635.270	-681.940	
		Min	-173.650	-742.920	-759.260	-741.760	-690.120	
		Max	-128.000	-565.590	-575.620	-572.750	-631.090	
		Average	-148.050	-669.632	-690.948	-675.867	-658.825	
UnBiased	64	-150.240	-1049.090	-1298.700	-1278.530	-1373.650		
	65	-144.640	-1000.770	-1251.160	-1234.430	-1510.960		
	197	-160.690	-1004.330	-1376.160	-1364.750	-1346.110		
	198	-163.430	-1037.300	-1371.580	-1355.480	-1340.050		
	318	-136.440	-938.680	-1231.250	-1222.560	-1210.120		
	319	-140.290	-951.080	-1158.240	-1149.010	-1137.120		
	Min	-163.430	-1049.090	-1376.160	-1364.750	-1510.960		
	Max	-136.440	-938.680	-1158.240	-1149.010	-1137.120		
	Average	-149.288	-996.875	-1281.182	-1267.460	-1319.668		



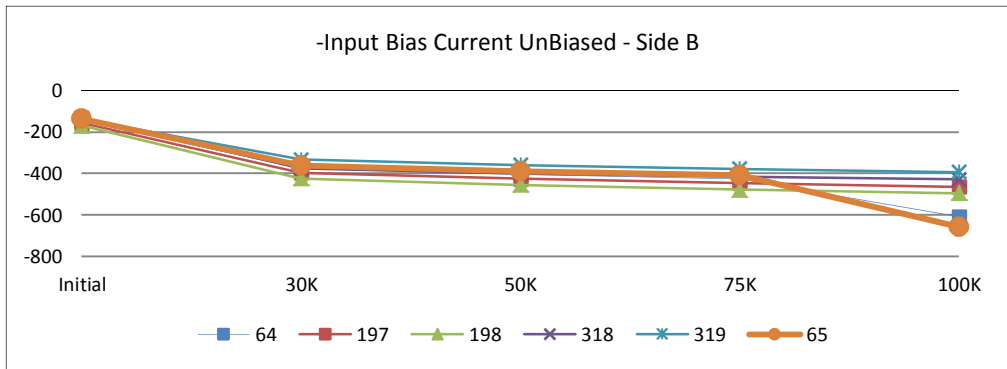
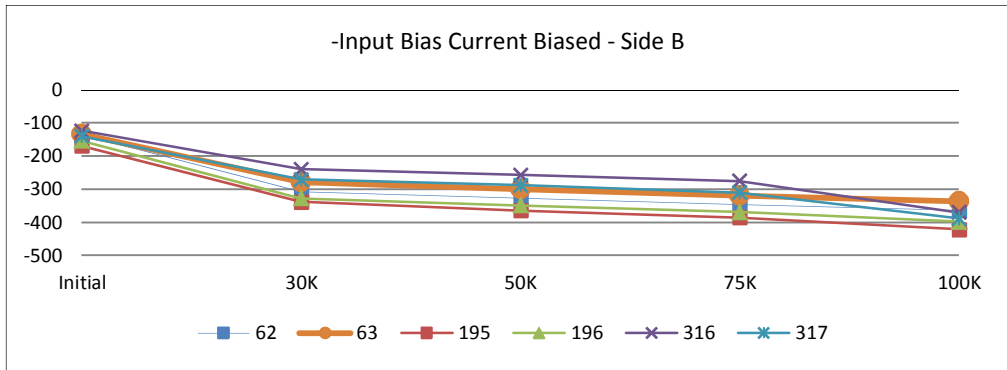
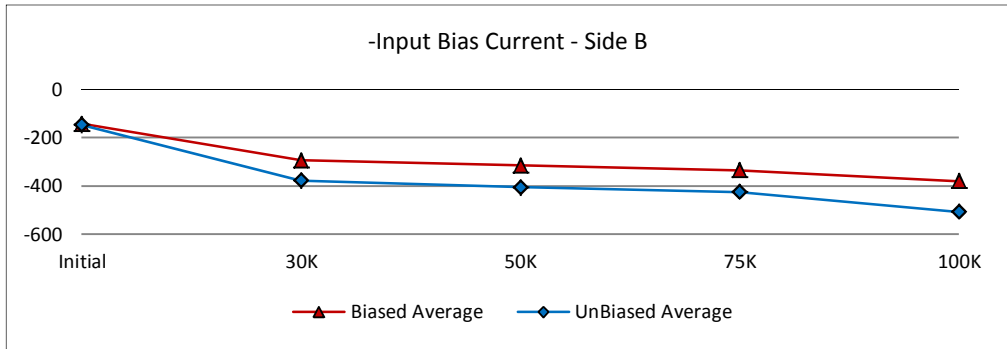
T# 6.3		IB+ [D]					nA	
SN		Initial	30K	50K	75K	100K	Limit	
Control	61	-149.730	-150.040	-150.550	-150.490	-150.510	<3000	
	Biased	62	-141.770	-679.390	-722.040	-699.290	-687.000	
		63	-145.630	-675.270	-689.300	-672.640	-668.490	
		195	-175.040	-734.410	-749.420	-734.300	-671.440	
		196	-160.680	-705.850	-745.740	-724.080	-652.500	
		316	-128.750	-564.470	-573.980	-571.960	-658.830	
		317	-143.790	-625.070	-628.410	-624.220	-671.430	
		Min	-175.040	-734.410	-749.420	-734.300	-687.000	
		Max	-128.750	-564.470	-573.980	-571.960	-652.500	
		Average	-149.277	-664.077	-684.815	-671.082	-668.282	
UnBiased	64	-152.470	-1013.910	-1264.760	-1254.030	-1385.090		
	65	-144.890	-963.670	-1214.950	-1204.100	-1518.750		
	197	-165.620	-978.680	-1347.380	-1339.120	-1331.920		
	198	-173.530	-1037.230	-1381.210	-1371.850	-1363.210		
	318	-138.180	-895.920	-1183.620	-1178.380	-1170.600		
	319	-140.340	-920.930	-1133.660	-1129.500	-1123.730		
	Min	-173.530	-1037.230	-1381.210	-1371.850	-1518.750		
	Max	-138.180	-895.920	-1133.660	-1129.500	-1123.730		
	Average	-152.505	-968.390	-1254.263	-1246.163	-1315.550		



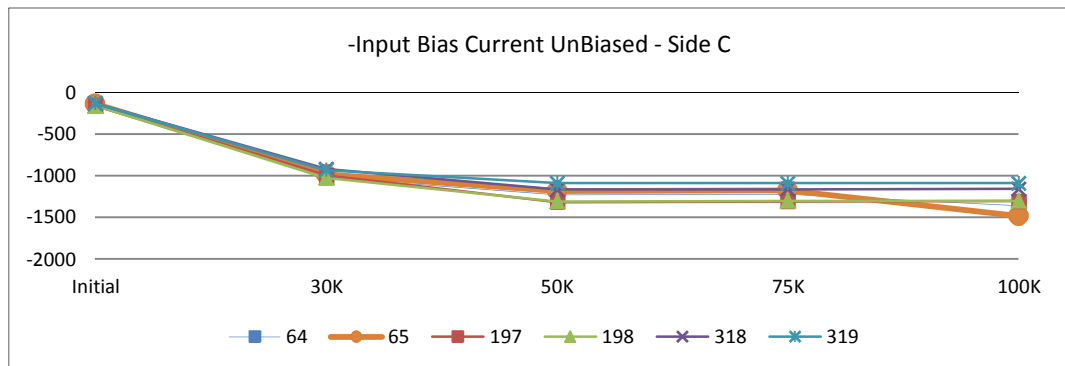
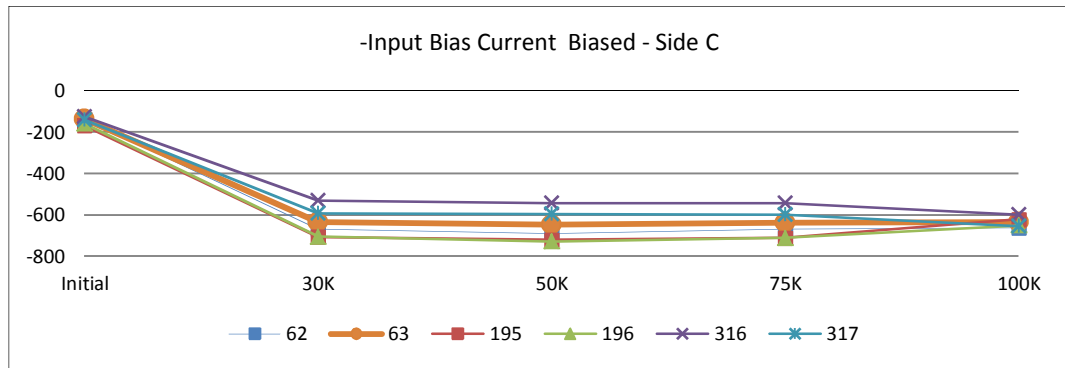
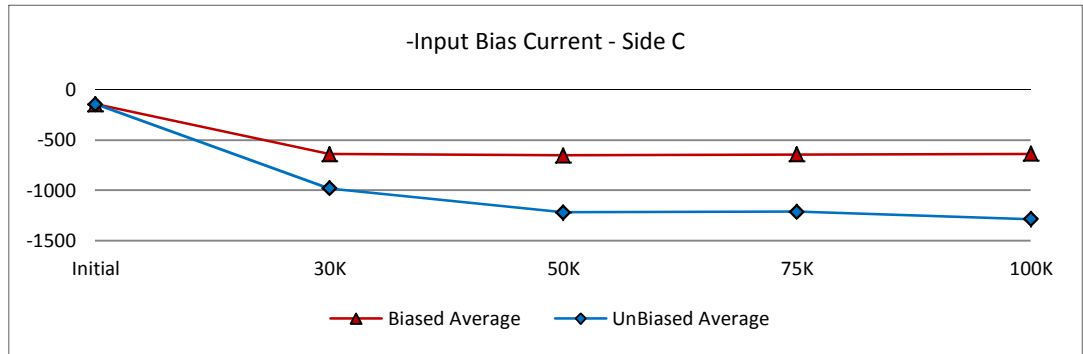
		T# 7	IB- [A]					nA
		SN	Initial	30K	50K	75K	100K	Limit
Control	61	-147.970	-148.240	-148.770	-148.560	-148.610	<3000	
	Biased	62	-142.640	-304.550	-324.400	-344.340	-360.410	
		63	-141.470	-281.410	-301.990	-322.000	-338.850	
		195	-173.370	-332.270	-355.520	-379.130	-411.550	
		196	-158.420	-320.380	-342.870	-363.240	-423.170	
		316	-129.570	-238.970	-257.400	-276.450	-360.050	
		317	-144.390	-267.580	-284.670	-305.030	-395.480	
		Min	-173.370	-332.270	-355.520	-379.130	-423.170	
		Max	-129.570	-238.970	-257.400	-276.450	-338.850	
		Average	-148.310	-290.860	-311.142	-331.698	-381.585	
UnBiased	64	-145.570	-358.250	-388.600	-407.880	-593.930		
	65	-143.420	-352.740	-379.610	-398.730	-640.840		
	197	-163.210	-381.920	-410.150	-429.180	-447.140		
	198	-175.350	-412.210	-442.980	-462.510	-482.810		
	318	-138.250	-348.310	-371.930	-389.520	-405.910		
	319	-141.690	-320.650	-345.090	-364.440	-380.510		
	Min	-175.350	-412.210	-442.980	-462.510	-640.840		
	Max	-138.250	-320.650	-345.090	-364.440	-380.510		
	Average	-151.248	-362.347	-389.727	-408.710	-491.857		



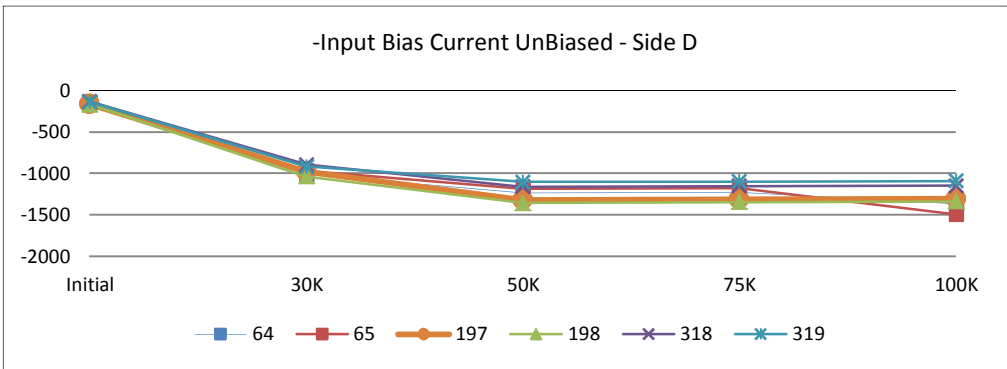
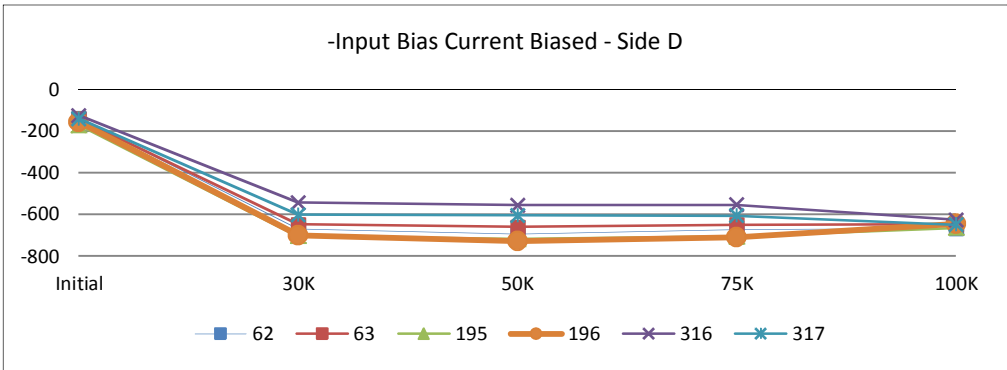
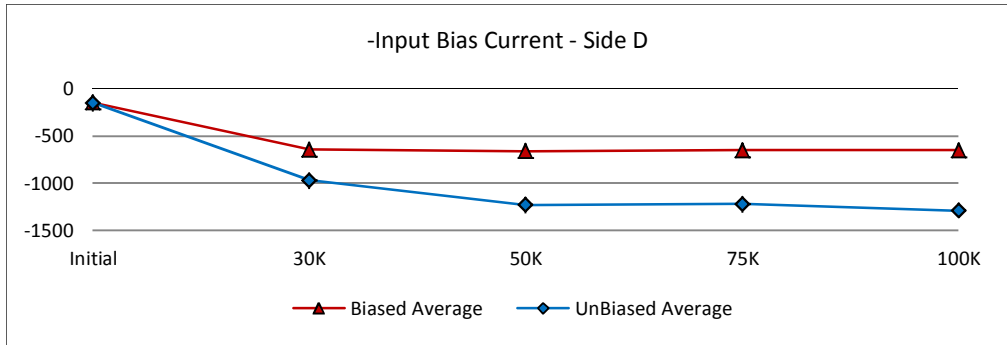
T# 7.1		IB- [B]					nA	
SN		Initial	30K	50K	75K	100K	Limit	
Control	61	-146.000	-146.120	-146.690	-146.650	-146.590	<3000	
	Biased	62	-136.960	-307.920	-327.980	-347.700	-363.630	
		63	-134.310	-279.940	-300.660	-320.480	-336.230	
		195	-169.190	-338.280	-364.380	-385.810	-421.340	
		196	-154.270	-327.620	-349.500	-369.580	-398.730	
		316	-123.610	-239.570	-257.700	-276.090	-370.520	
		317	-140.080	-270.700	-288.050	-310.310	-388.870	
		Min	-169.190	-338.280	-364.380	-385.810	-421.340	
		Max	-123.610	-239.570	-257.700	-276.090	-336.230	
		Average	-143.070	-294.005	-314.712	-334.995	-379.887	
UnBiased	64	-145.710	-375.920	-405.620	-427.420	-607.490		
	65	-138.020	-360.390	-389.220	-409.300	-658.080		
	197	-157.550	-395.660	-425.680	-446.030	-463.630		
	198	-169.390	-423.870	-455.530	-477.480	-494.470		
	318	-132.550	-373.950	-398.940	-414.660	-428.710		
	319	-137.320	-333.300	-359.340	-378.140	-392.540		
	Min	-169.390	-423.870	-455.530	-477.480	-658.080		
	Max	-132.550	-333.300	-359.340	-378.140	-392.540		
	Average	-146.757	-377.182	-405.722	-425.505	-507.487		



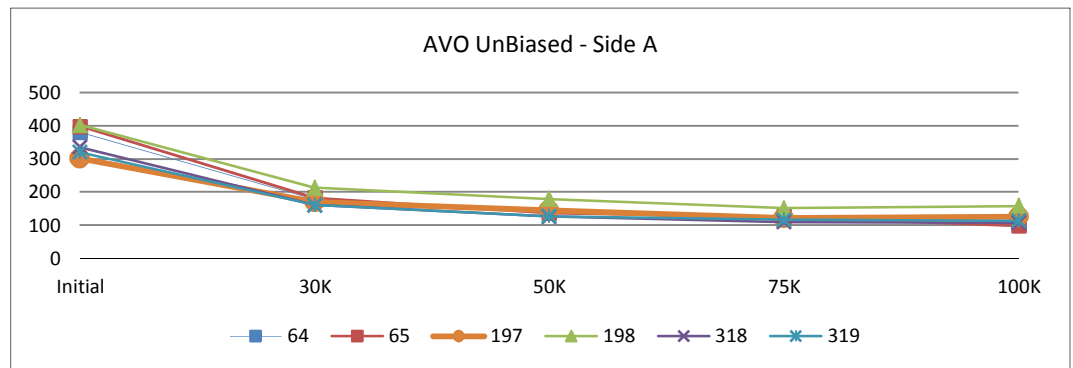
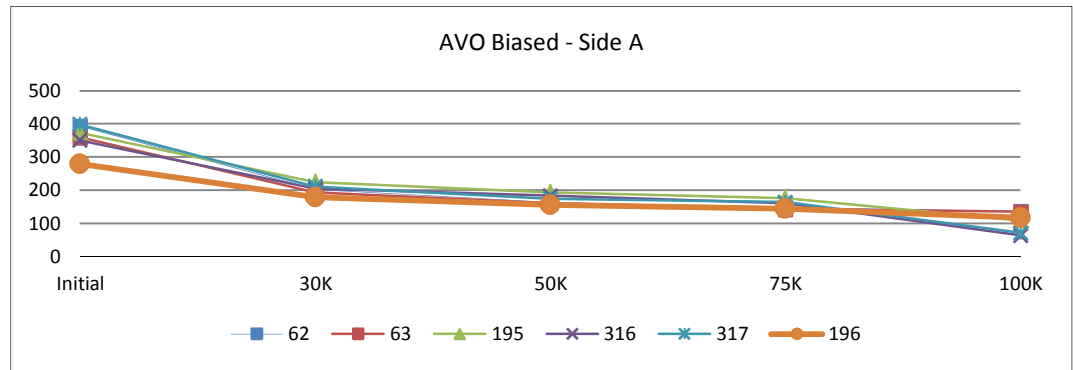
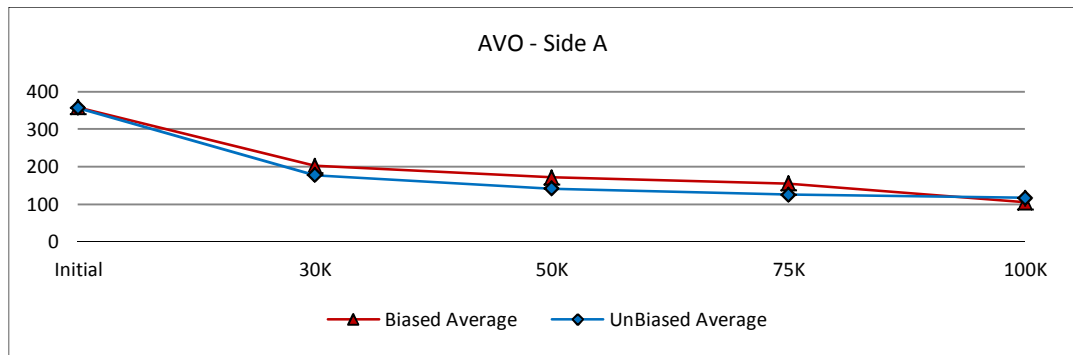
		T# 7.2	IB- [C]					nA
		SN	Initial	30K	50K	75K	100K	Limit
Control	61	-146.950	-147.290	-147.750	-147.750	-147.670		<3000
	Biased	62	-137.140	-670.790	-690.460	-669.350	-662.340	
		63	-138.640	-634.900	-646.950	-637.850	-635.160	
		195	-169.530	-706.990	-720.780	-711.430	-622.060	
		196	-159.750	-705.120	-729.140	-711.640	-650.850	
		316	-125.380	-530.870	-542.610	-543.210	-599.600	
		317	-141.630	-592.860	-596.400	-598.600	-655.140	
		Min	-169.530	-706.990	-729.140	-711.640	-662.340	
		Max	-125.380	-530.870	-542.610	-543.210	-599.600	
		Average	-145.345	-640.255	-654.390	-645.347	-637.525	
UnBiased	64	-146.690	-1026.880	-1229.850	-1226.200	-1358.140		
	65	-142.040	-981.700	-1186.430	-1179.140	-1486.820		
	197	-159.020	-994.010	-1315.840	-1308.270	-1304.550		
	198	-160.270	-1027.100	-1309.370	-1303.140	-1302.530		
	318	-133.920	-921.020	-1168.110	-1163.240	-1157.910		
	319	-135.610	-934.500	-1090.850	-1089.310	-1089.150		
	Min	-160.270	-1027.100	-1315.840	-1308.270	-1486.820		
	Max	-133.920	-921.020	-1090.850	-1089.310	-1089.150		
	Average	-146.258	-980.868	-1216.742	-1211.550	-1283.183		



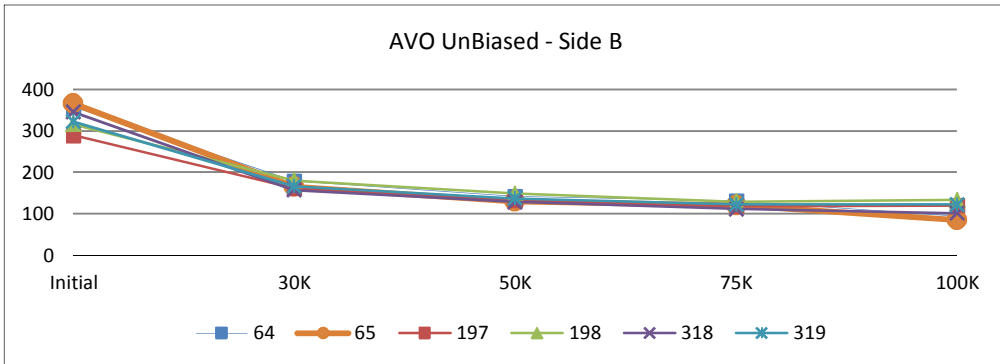
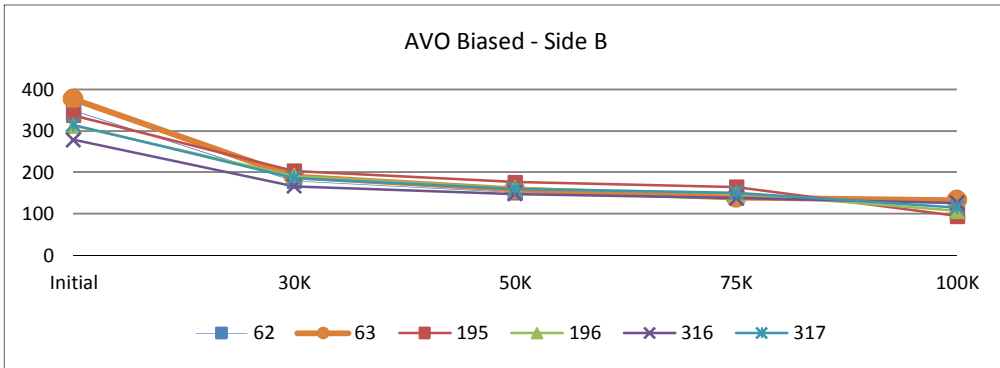
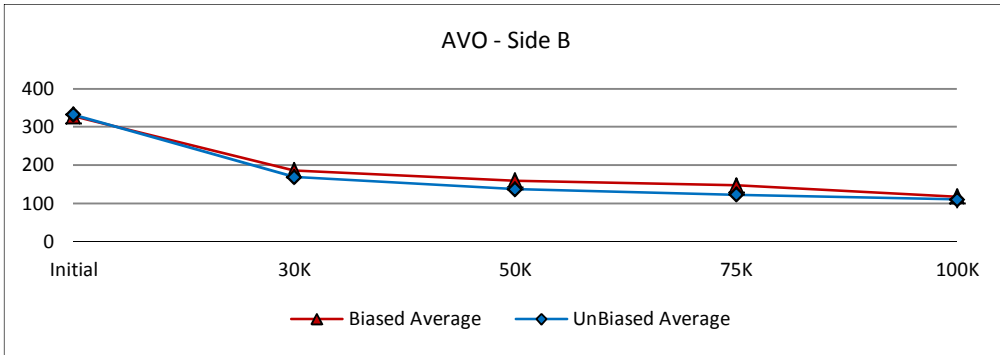
T# 7.3		IB- [D]					nA	
SN		Initial	30K	50K	75K	100K	Limit	
Control	61	-147.780	-147.980	-148.490	-148.580	-148.460	<3000	
	Biased	62	-139.570	-668.870	-693.780	-674.620	-666.050	
		63	-142.880	-648.290	-659.920	-649.860	-648.730	
		195	-171.810	-704.300	-718.070	-706.770	-664.840	
		196	-157.660	-700.800	-727.380	-710.370	-645.380	
		316	-126.160	-544.200	-556.240	-554.910	-627.030	
		317	-142.110	-601.730	-605.700	-606.460	-649.300	
		Min	-171.810	-704.300	-727.380	-710.370	-666.050	
		Max	-126.160	-544.200	-556.240	-554.910	-627.030	
		Average	-146.698	-644.698	-660.182	-650.498	-650.222	
UnBiased	64	-148.070	-1011.870	-1235.480	-1228.290	-1365.020		
	65	-141.840	-966.010	-1188.900	-1180.320	-1490.170		
	197	-161.120	-977.230	-1321.050	-1310.680	-1306.440		
	198	-170.510	-1035.970	-1355.940	-1344.110	-1337.480		
	318	-134.420	-892.890	-1158.920	-1153.040	-1146.970		
	319	-140.070	-918.540	-1100.710	-1098.440	-1091.900		
	Min	-170.510	-1035.970	-1355.940	-1344.110	-1490.170		
	Max	-134.420	-892.890	-1100.710	-1098.440	-1091.900		
	Average	-149.338	-967.085	-1226.833	-1219.147	-1289.663		



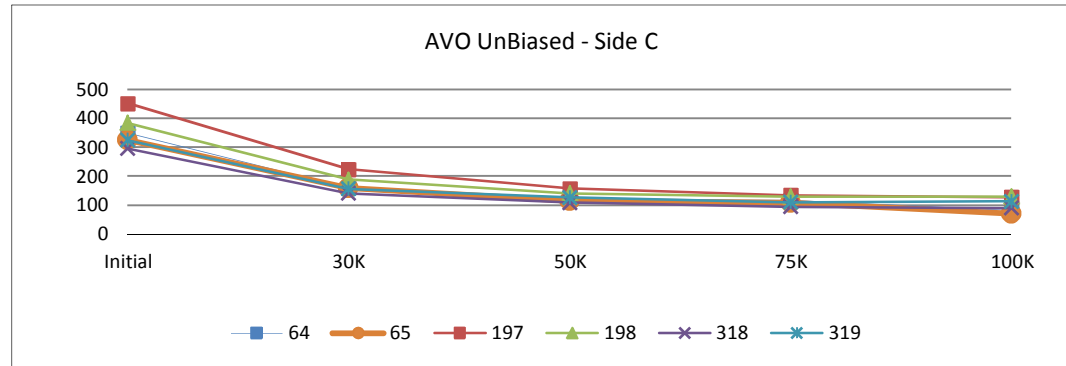
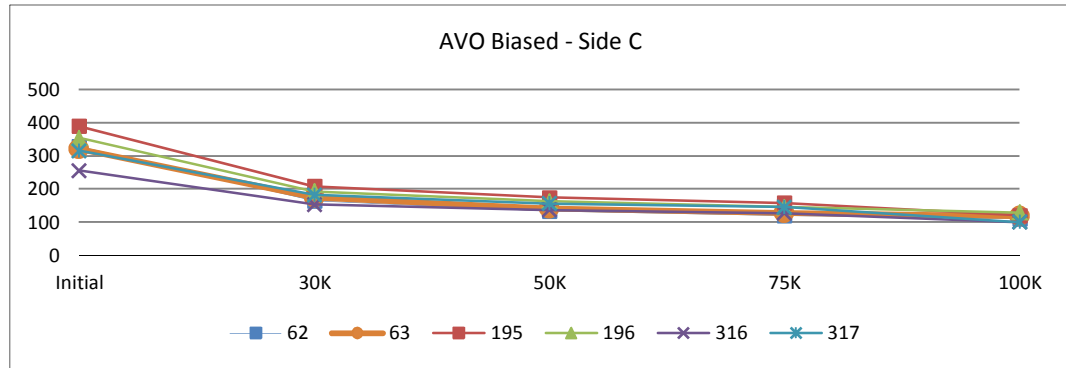
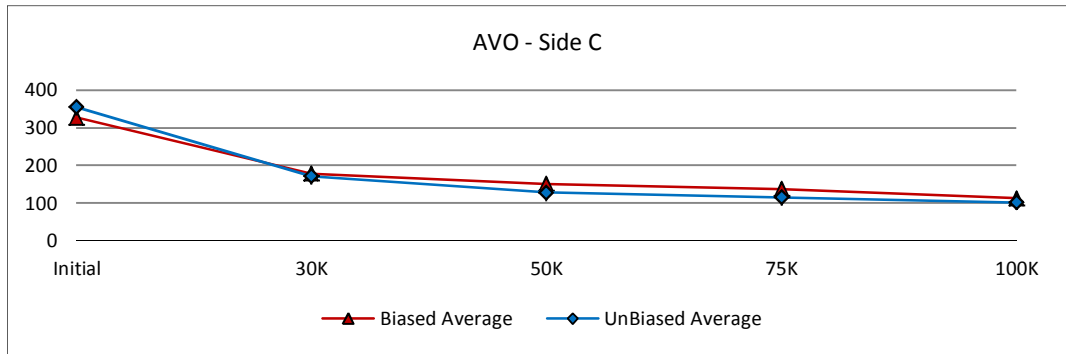
T# 8		AVO A RI=10K					V/mV	
SN		Initial	30K	50K	75K	100K	Limit	
Control	61	391.500	391.180	398.430	444.230	401.970	>25	
	Biased	62	392.440	200.760	163.870	147.670	135.020	
		63	358.240	192.910	159.570	142.590	134.070	
		195	373.120	224.520	193.150	176.360	108.580	
		196	278.550	178.280	154.580	142.880	117.210	
		316	350.450	204.390	182.470	160.300	63.000	
		317	397.970	210.920	173.810	163.670	70.440	
		Min	278.550	178.280	154.580	142.590	63.000	
		Max	397.970	224.520	193.150	176.360	135.020	
		Average	358.462	201.963	171.242	155.578	104.720	
UnBiased	64	380.660	177.820	137.640	127.740	101.200		
	65	397.480	182.880	137.140	124.230	97.980		
	197	301.740	170.130	144.850	121.360	124.840		
	198	401.860	212.580	179.170	151.570	157.750		
	318	334.760	161.280	125.750	109.820	107.710		
	319	319.380	160.610	126.970	116.330	113.630		
	Min	301.740	160.610	125.750	109.820	97.980		
	Max	401.860	212.580	179.170	151.570	157.750		
	Average	355.980	177.550	141.920	125.175	117.185		



T# 8.1		AVO B RI=10K					V/mV	
SN		Initial	30K	50K	75K	100K	Limit	
Control	61	382.960	379.400	385.550	381.410	389.930	>25	
	Biased	62	349.030	179.250	152.010	138.370	127.470	
		63	377.020	190.560	159.330	139.840	133.590	
		195	337.550	203.380	176.290	165.200	94.890	
		196	312.310	190.910	162.180	148.950	106.780	
		316	277.800	166.150	147.830	138.120	126.000	
		317	314.500	186.090	160.290	150.810	115.250	
		Min	277.800	166.150	147.830	138.120	94.890	
		Max	377.020	203.380	176.290	165.200	133.590	
		Average	328.035	186.057	159.655	146.882	117.330	
UnBiased	64	357.430	178.810	142.770	131.920	95.080		
	65	364.900	165.870	130.150	120.680	85.230		
	197	289.210	162.180	132.190	118.860	120.210		
	198	315.620	179.970	148.450	129.680	133.100		
	318	344.950	156.870	128.330	111.380	101.800		
	319	322.110	166.370	137.130	122.240	122.160		
	Min	289.210	156.870	128.330	111.380	85.230		
	Max	364.900	179.970	148.450	131.920	133.100		
	Average	332.370	168.345	136.503	122.460	109.597		



T# 8.2		AVO C RI=10K					V/mV	
SN		Initial	30K	50K	75K	100K	Limit	
Control	61	350.710	348.250	358.090	350.350	361.870	>25	
	Biased	62	327.170	163.410	133.620	119.670	110.090	
		63	319.920	172.890	141.640	127.670	118.600	
		195	389.230	207.580	174.310	157.930	120.050	
		196	353.740	192.330	162.800	145.740	129.480	
		316	255.310	153.070	136.670	126.840	99.950	
		317	315.210	181.740	155.670	145.420	100.550	
		Min	255.310	153.070	133.620	119.670	99.950	
		Max	389.230	207.580	174.310	157.930	129.480	
		Average	326.763	178.503	150.785	137.212	113.120	
UnBiased	64	348.090	159.850	121.530	116.570	82.210		
	65	325.330	158.740	114.300	108.210	70.220		
	197	450.880	223.810	157.530	134.360	128.020		
	198	383.570	188.610	141.070	130.220	130.200		
	318	295.450	140.810	108.670	94.720	90.120		
	319	324.760	156.430	126.670	110.490	112.780		
	Min	295.450	140.810	108.670	94.720	70.220		
	Max	450.880	223.810	157.530	134.360	130.200		
	Average	354.680	171.375	128.295	115.762	102.258		



T# 8.3		AVO D RI=10K					V/mV	
SN		Initial	30K	50K	75K	100K	Limit	
Control	61	405.910	397.420	403.980	399.370	397.030	>25	
	62	271.970	168.620	151.100	136.850	125.290		
Biased	63	369.080	217.360	192.270	172.960	157.050		
	195	404.300	246.470	231.040	204.400	147.300		
	196	428.750	236.260	214.540	193.540	165.560		
	316	369.940	259.860	221.740	201.280	132.700		
	317	559.390	320.770	273.920	251.580	129.650		
	Min	271.970	168.620	151.100	136.850	125.290		
	Max	559.390	320.770	273.920	251.580	165.560		
	Average	400.572	241.557	214.102	193.435	142.925		
	UnBiased	64	403.730	239.740	212.620	202.330	122.660	
		65	361.980	210.590	190.000	183.490	114.990	
197		411.220	238.290	236.180	211.070	217.110		
198		454.440	261.100	243.980	227.630	232.820		
318		318.450	182.460	178.430	171.010	164.510		
319		393.390	247.090	222.330	219.710	213.070		
Min		318.450	182.460	178.430	171.010	114.990		
Max		454.440	261.100	243.980	227.630	232.820		
Average		390.535	229.878	213.923	202.540	177.527		

