

FINDINGS U2010B

There are 4 tests below with out-of-circuit resistance test results for the 9 of 16 chips I have received that were empirically confirmed as operational on a CMEW020, (machine powers on and speed is adjustable). Test 4 is probably the only relevant test. Tests 4.5 A & B are Test 4 measurements repeated in-circuit on good and bad chips. Measurements are from a new Fluke 87 V. Odd readings were double/triple checked, and confirmed as repeatable in situ. "NC" = No Connection
Numbers displayed on this sheet have been normalized and display minor rounded figures and percentages based on real numbers in each cell. Chips are from 4 grey market suppliers: 1.) GOOD-1 2.) ALI-1 : ALI-5 3.) ALI-6 : ALI-10 4.) ALI-11 : ALI-15
Chip markings from suppliers 1 and 4, along with 2 and 3 match respectively, ("match" = lettering, shapes, and casting marks on all sides, including the bottom, but some have sharp top epoxy edges indicating possible post production processing).
All values are in megaohms. All rough data for all chips is somewhere on sheet 2. Chips from suppliers 1 and 4 look the best, but chips from 2 performed the worst. A pig in a dress I guess.

TEST 1		RESISTANCE FROM PIN (n) TO GROUND (PIN 10)																	
			ISENSE 1	ISENSE 2	C ₀	CONTROL	COMP	ILOAD	CSOFT	VREF	MODE SEL	GND	SUPPLY V	HI-LOAD	OVERLOAD	V _φ	VSYNC	OUTPUT	
	CHIP	LEAD	PIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	GOOD-1	blk/com	10	nc	nc	0.480	0.557	0.570	0.501	0.567	0.076	0.189		0.368	0.668	0.998	nc	0.833	nc
2	ALI-1	blk/com	10	nc	nc	0.472	0.503	0.514	0.472	0.511	0.067	0.169		0.348	0.618	0.917	nc	0.753	nc
3	ALI-2	blk/com	10	nc	nc	0.452	0.488	0.505	0.463	0.502	0.071	0.176		0.345	0.613	0.899	nc	0.755	nc
4	ALI-6	blk/com	10	nc	nc	0.460	0.498	0.516	0.474	0.512	0.129	0.316		0.353	0.718	0.950	nc	0.943	nc
5	ALI-7	blk/com	10	nc	nc	0.466	0.501	0.544	0.478	0.541	0.128	0.317		0.363	0.722	0.950	nc	0.905	nc
6	ALI-8	blk/com	10	nc	nc	0.466	0.500	0.543	0.478	0.541	0.126	0.313		0.363	0.719	0.946	nc	0.909	nc
7	ALI-9	blk/com	10	nc	nc	0.465	0.502	0.454	0.479	0.542	0.129	0.318		0.366	0.728	0.957	nc	0.941	nc
8	ALI-12	blk/com	10	nc	nc	0.469	0.547	0.558	0.488	nc	0.070	0.174		0.357	0.647	0.981	nc	0.799	nc
9	ALI-14	blk/com	10	nc	nc	0.463	0.541	0.554	0.483	0.551	0.067	0.166		0.351	0.352	0.974	nc	0.782	nc
SMALLEST						0.452	0.488	0.454	0.463	0.502	0.067	0.166		0.345	0.352	0.899		0.753	
LARGEST						0.480	0.557	0.570	0.501	0.567	0.129	0.318		0.368	0.728	0.998		0.943	
RANGE LO						3%	5%	14%	4%	6%	30%	30%		3%	45%	6%		11%	
AVERAGE						0.466	0.515	0.529	0.479	0.533	0.096	0.238		0.357	0.643	0.952	nc	0.847	nc
RANGE HI						3%	8%	7%	4%	6%	26%	25%		3%	12%	5%		10%	
RANGE TOT						6%	13%	21%	8%	12%	56%	56%		6%	57%	10%		21%	

TEST 2		RESISTANCE FROM PIN (n) TO VOLTS SUPPLY (PIN 11)																		
				ISENSE 1	ISENSE 2	Cp	CONTROL	COMP	ILOAD	CSOFT	VREF	MODE SEL	GND	SUPPLY V	HI-LOAD	OVERLOAD	Vrφ	VSYNCR	OUTPUT	
	CHIP	LEAD	PIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
1	GOOD-1	blk/com	11	nc	nc	1.152	1.047	1.044	1.119	1.165	0.601	0.798	0.681		0.514	1.502	nc	1.550	nc	
2	ALI-1	blk/com	11	nc	nc	0.978	0.952	0.945	1.021	1.094	0.548	0.726	0.620		0.498	1.325	nc	1.390	nc	
3	ALI-2	blk/com	11	nc	nc	0.963	0.943	0.936	1.022	1.090	0.546	0.730	0.621		0.494	1.302	nc	1.396	nc	
4	ALI-6	blk/com	11	nc	nc	1.072	0.994	0.990	1.074	1.178	0.617	0.948	0.753		0.507	1.406	nc	1.702	nc	
5	ALI-7	blk/com	11	nc	nc	1.059	0.997	0.994	1.079	1.178	0.618	0.951	0.753		0.541	1.408	nc	1.699	nc	
6	ALI-8	blk/com	11	nc	nc	1.057	0.995	0.994	1.081	1.178	0.616	0.943	0.749		0.541	0.961	nc	0.971	nc	
7	ALI-9	blk/com	11	nc	nc	1.085	1.001	0.998	1.080	1.185	0.619	0.953	0.756		0.514	1.406	nc	1.702	nc	
8	ALI-12	blk/com	11	nc	nc	1.107	1.015	1.013	1.077	nc	0.579	0.762	0.654		0.501	1.448	nc	1.482	nc	
9	ALI-14	blk/com	11	nc	nc	1.094	1.007	1.009	1.069	1.117	0.571	0.745	0.643		0.497	1.447	nc	1.446	nc	
SMALLEST						0.963	0.943	0.936	1.021	1.090	0.546	0.726	0.620		0.494	0.961		0.971		
LARGEST						1.152	1.047	1.044	1.119	1.185	0.619	0.953	0.756		0.541	1.502		1.702		
RANGE LO						9%	5%	6%	5%	5%	8%	14%	10%		4%	29%		34%		
AVERAGE						nc	nc	1.063	0.995	0.991	1.069	1.15	0.591	0.840	0.692	0.512	1.356	nc	1.482	nc
RANGE HI						8%	5%	5%	4%	3%	5%	12%	8%		5%	10%		13%		
RANGE TOT						17%	10%	11%	9%	8%	12%	25%	19%		9%	39%		47%		

TEST 3		RESISTANCE FROM GROUND (PIN 10) TO PIN (n)																	
			ISENSE 1	ISENSE 2	C ₀	CONTROL	COMP	ILOAD	CSOFT	VREF	MODE SEL	GND	SUPPLY V	HI-LOAD	OVERLOAD	V _{TP}	VS _{SYNC}	OUTPUT	
	CHIP	LEAD	PIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	GOOD-1	red	10	0.701	1.143	0.948	1.117	0.705	0.682	0.657	0.076	0.189		0.681	nc	1.220	1.118	0.838	1.120
2	ALI-1	red	10	0.658	1.036	0.965	1.021	0.934	0.618	0.607	0.069	0.173		0.616	nc	1.117	1.021	0.762	1.025
3	ALI-2	red	10	0.672	1.067	0.975	1.047	1.008	0.629	0.622	0.071	0.177		0.620	nc	1.130	1.046	0.762	1.038
4	ALI-6	red	10	1.017	1.198	0.561	1.120	1.136	0.725	0.717	0.130	0.333		0.754	nc	1.277	1.127	0.925	1.164
5	ALI-7	red	10	0.656	1.114	0.989	1.047	0.689	0.681	0.658	0.129	0.325		0.752	nc	1.257	1.069	0.916	1.095
6	ALI-8	red	10	0.658	1.111	0.996	1.047	0.689	0.680	0.655	0.126	0.319		0.748	nc	1.256	1.063	0.913	1.090
7	ALI-9	red	10	0.684	1.151	1.017	1.072	0.957	0.698	0.681	0.130	0.327		0.755	nc	1.271	1.084	0.923	1.113
8	ALI-12	red	10	0.964	1.108	0.564	1.085	0.751	0.667	nc	0.071	0.176		0.654	nc	1.179	1.096	0.808	1.090
9	ALI-14	red	10	nc	nc	0.912	1.082	0.747	0.661	0.640	0.067	0.167		0.644	nc	1.163	1.077	0.799	1.067
SMALLEST				0.656	1.036	0.561	1.021	0.689	0.618	0.607	0.067	0.167		0.616		1.117	1.021	0.762	1.025
LARGEST				1.017	1.198	1.017	1.120	1.136	0.725	0.717	0.130	0.333		0.755		1.277	1.127	0.925	1.164
RANGE LO				13%	7%	36%	5%	19%	8%	7%	31%	31%		11%		8%	5%	10%	6%
AVERAGE				0.751	1.116	0.881	1.071	0.846	0.671	0.655	0.096	0.243		0.692	nc	1.208	1.078	0.850	1.089
RANGE HI				26%	7%	13%	4%	26%	7%	9%	26%	27%		8%		5%	4%	8%	6%
RANGE TOT				39%	14%	50%	9%	44%	15%	16%	57%	59%		19%		13%	10%	16%	12%

TEST 4		RESISTANCE FROM VOLTS SUPPLY (PIN 11) TO PIN (n)																																
	CHIP	LEAD	PIN	1	ISENSE 1	2	ISENSE 2	3	C ₀	4	CONTROL	5	COMP	6	ILOAD	7	CSOFT	8	VREF	9	MODE SEL	10	GND	11	SUPPLY V	12	HI-LOAD	13	OVERLOAD	14	V _{TP}	15	VSYNC	OUTPUT
1	GOOD-1	red	11	0.466	0.457	0.465	0.502	0.492	0.477	0.479	0.401	0.498	0.371	nc	0.476	0.469	0.493	0.432																
2	ALI-1	red	11	0.443	0.433	0.442	0.484	0.468	0.455	0.453	0.371	0.465	0.343	nc	0.449	0.440	0.464	0.407																
3	ALI-2	red	11	0.450	0.440	0.446	0.489	0.472	0.460	0.458	0.373	0.471	0.346	nc	0.455	0.446	0.469	0.410																
4	ALI-6	red	11	0.457	0.447	0.455	0.496	0.497	0.468	0.467	0.391	0.548	0.359	nc	0.466	0.458	0.485	0.423																
5	ALI-7	red	11	0.455	0.446	0.452	0.492	0.476	0.464	0.463	0.394	0.548	0.362	nc	0.463	0.455	0.481	0.422																
6	ALI-8	red	11	0.457	0.448	0.454	0.494	0.479	0.467	0.466	0.397	0.549	0.364	nc	0.465	0.457	0.483	0.425																
7	ALI-9	red	11	0.460	0.450	0.457	0.497	0.482	0.470	0.469	0.398	0.554	0.364	nc	0.467	0.460	0.486	0.427																
8	ALI-12	red	11	0.453	0.442	0.451	0.489	0.477	0.463	nc	0.381	0.477	0.355	nc	0.463	0.457	0.482	0.418																
9	ALI-14	red	11	nc	nc	0.455	0.484	0.472	0.456	0.459	0.375	0.467	0.351	nc	0.460	0.454	0.478	0.413																

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SMALLEST	0.443	0.433	0.442	0.484	0.468	0.455	0.453	0.371	0.465	0.343		0.449	0.440	0.464	0.407	
LARGEST	0.466	0.457	0.465	0.502	0.497	0.477	0.479	0.401	0.554	0.371		0.476	0.469	0.493	0.432	
RANGE LO	3%	3%	2%	2%	2%	2%	2%	4%	9%	4%		3%	3%	3%	3%	
AVERAGE		0.455	0.446	0.453	0.492	0.480	0.464	0.464	0.387	0.508	0.357	nc	0.463	0.455	0.480	0.420
RANGE HI	2%	3%	3%	2%	4%	3%	3%	4%	8%	4%		3%	3%	3%	3%	
RANGE TOT	5%	5%	5%	4%	6%	5%	6%	8%	17%	8%		6%	6%	6%	6%	

TEST 4.5A RESISTANCE FROM VOLTS SUPPLY (PIN 11) TO PIN (n) IN-CIRCUIT WITH PCB DISCONNECTED FROM THE MOTOR AND SWITCH

	CHIP	LEAD	PIN	ISENSE 1	ISENSE 2	C ₀	CONTROL	COMP	ILOAD	CSOFT	VREF	MODE SEL	GND	SUPPLY V	HI-LOAD	OVERLOAD	V _{rip}	VSYNC	OUTPUT
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	NO CHIP	red	11	2.0++	2.0++	nc	2.0++	2.0++	2.0++	2.0++	2.0++	nc	2.0++		SHORTED	nc	0.075	0.419	2.0++
1	GOOD-1	red	11	0.369	0.369	0.464	0.374	0.374	0.371	0.478	0.370	0.494	0.365		SHORTED	0.475	0.076	0.414	0.365
2	ALI-1	red	11	0.360	0.360	0.457	0.366	0.366	0.362	0.470	0.362	0.476	0.356		SHORTED	0.465	0.076	0.407	0.355
3	ALI-2	red	11	0.356	0.355	0.456	0.360	0.361	0.357	0.469	0.357	0.477	0.352		SHORTED	0.465	0.076	0.405	0.352
4	ALI-6	red	11	0.351	0.351	0.452	0.356	0.356	0.352	0.463	0.352	0.544	0.346		SHORTED	0.459	0.075	0.397	0.345
5	ALI-7	red	11	0.349	0.349	0.444	0.355	0.355	0.352	0.456	0.353	0.521	0.348		SHORTED	0.454	0.075	0.398	0.348
6	ALI-8	red	11	0.351	0.351	0.444	0.356	0.356	0.353	0.456	0.353	0.519	0.347		SHORTED	0.453	0.075	0.395	0.347
7	ALI-9	red	11	0.350	0.350	0.447	0.355	0.355	0.352	0.458	0.351	0.523	0.346		SHORTED	0.455	0.075	0.395	0.346
8	ALI-12	red	11	0.354	0.354	0.453	0.359	0.359	0.356	7.100	0.355	0.474	0.350		SHORTED	0.463	0.075	0.397	0.350
9	ALI-14	red	11	0.351	0.351	0.449	0.356	0.356	0.353	0.463	0.353	0.468	0.348		SHORTED	0.460	0.075	0.396	0.349
	SMALLEST			0.349	0.349	0.444	0.355	0.355	0.352	0.456	0.351	0.468	0.346		(SHORT - ON PCB)	0.453	0.075	0.395	0.345
	LARGEST			0.369	0.369	0.464	0.374	0.374	0.371	7.100	0.370	0.544	0.365			0.475	0.076	0.414	0.365
	RANGE LO			2%	1%	2%	1%	1%	1%	2%	1%	6%	2%			2%	0%	1%	2%
	AVERAGE			0.355	0.354	0.452	0.360	0.360	0.356	1.201	0.356	0.500	0.351			0.461	0.075	0.400	0.351
	RANGE HI			4%	4%	3%	4%	4%	4%	93%	4%	8%	4%			3%	0%	3%	4%
	RANGE TOT			5%	5%	4%	5%	5%	5%	95%	5%	14%	5%			5%	0%	5%	5%

TEST 4.5B RESISTANCE FROM VOLTS SUPPLY (PIN 11) TO PIN (n) IN-CIRCUIT WITH PCB DISCONNECTED FROM THE MOTOR AND SWITCH

	BAD CHIPS	CHIP	LEAD	PIN	ISENSE 1	ISENSE 2	C ₀	CONTROL	COMP	ILOAD	CSOFT	VREF	MODE SEL	GND	SUPPLY V	HI-LOAD	OVERLOAD	V _{rip}	VSYNC	OUTPUT
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
		ORIGINAL	red	11	0.003	0.003	0.444	0.010	0.010	0.007	0.456	0.007	0.164	0.000		SHORTED	0.451	0.075	0.393	0.000
		ERROR % vs AVERAGE			99%	99%	2%	97%	97%	98%	62%	98%	67%	100%			2%	0%	2%	100%
		ALI-3	red	11	0.347	0.347	0.344	0.352	0.352	0.348	0.348	0.346	0.464	0.341		SHORTED	0.451	0.075	0.391	0.342
					2%	2%	24%	2%	2%	2%	71%	3%	7%	3%			2%	0%	2%	3%
		ALI-4	red	11	0.003	0.003	0.442	0.010	0.010	0.007	0.454	0.005	0.157	0.000		SHORTED	0.452	0.075	0.390	0.000
					99%	99%	2%	97%	97%	98%	62%	99%	69%	100%			2%	0%	3%	100%
		ALI-5	red	11	0.044	0.289	0.286	0.296	0.295	0.293	0.456	0.293	0.434	0.286		SHORTED	0.452	0.075	0.391	0.287
					88%	18%	37%	18%	18%	18%	62%	18%	13%	19%			2%	0%	2%	18%
		ALI-10	red	11	0.003	0.000	0.440	0.000	0.000	0.005	0.468	0.005	0.419	0.000		SHORTED	0.443	0.075	0.392	0.000
					99%	100%	3%	100%	100%	99%	61%	99%	16%	100%			4%	0%	2%	100%
		ALI-11	red	11	0.003	0.003	0.450	0.010	0.010	0.007	0.053	0.005	0.000	0.000		SHORTED	0.460	0.075	0.396	0.000
					99%	99%	0%	97%	97%	98%	96%	99%	100%	100%			0%	0%	1%	100%
		ALI-13	red	11	0.003	0.003	0.451	0.007	0.007	0.000	0.006	0.000	0.000	0.000		SHORTED	0.462	0.075	0.396	0.000
					99%	99%	0%	98%	98%	100%	99%	100%	100%	100%			0%	0%	1%	100%
		ALI-15	red	11	0.373	0.372	0.450	0.371	0.372	0.367	0.464	0.367	nc	0.369		SHORTED	0.459	0.075	0.393	0.368
					-5%	-5%	0%	-3%	-4%	-3%	61%	-3%	100%	-5%			0%	0%	2%	-5%

NOTE: "Bad chips" in-circuit data for test 4 is included here, but all four tests of these chips out of circuit is included on sheet 2. For Test 4.5x, values are after long settling times due to circuit capacitance. Bad chips often have long settling times. The longest settling times were from the open circuit test of the PCB without a chip.

1.000 = 1,000,000 ohms
0.100 = 100,000 ohms
0.010 = 10,000 ohms
0.001 = 1,000 ohms

ScratchPadData

BAD CHIP

sequential

blk

red	10	0
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Nonseq-gn

bik
sequentialsequential
balls.

rod

NEW CHIP

blk

red

blk

red

NEW CLUB

NEW CHIP
bills

rod

h1k

red

100

original trim pot

29.67k

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
ORIGINAL/BAD CHIP	blk/com	10	nc	nc	0.4662	0.5011	0.542	0.4717	0.5154	0.0692	0.1721	1.2E-06	0.5025	0.948	nc	0.781	nc
NEW CHIP	blk/com	10	nc	nc	0.4798	0.557	0.57	0.5005	0.567	0.0758	0.1888	0.3683	0.668	0.998	nc	0.833	nc
ORIGINAL/BAD CHIP	blk/com	11	nc	nc	0.4651	0.5002	0.541	0.4701	0.5146	0.0693	0.1724	1.5E-06	0.5019	0.946	nc	0.792	nc
NEW CHIP	blk/com	11	nc	nc	1.152	1.047	1.044	1.119	1.165	0.601	0.798	0.681	0.5141	1.502	nc	1.55	nc
ORIGINAL/BAD CHIP	red	10	0.468	0.4564	0.4623	0.5009	0.4908	0.4789	0.4777	0.0675	0.1692	1.3E-06	nc	0.4759	0.4701	0.4896	0.4355
NEW CHIP	red	10	0.701	1.143	0.948	1.117	0.705	0.682	0.657	0.0756	0.1893	0.681	nc	1.22	1.118	0.838	1.12
ORIGINAL/BAD CHIP	red	11	0.4592	0.4483	0.4535	0.4917	0.4812	0.4689	0.4677	0.0695	0.1741	1.4E-06	nc	0.4648	0.4588	0.4773	0.423
NEW CHIP	red	11	0.4659	0.4571	0.4648	0.502	0.492	0.477	0.4791	0.4008	0.4977	0.3714	nc	0.4762	0.4689	0.4934	0.4322
NEW CHIP	blk/com	10	nc	nc	0.4798	0.557	0.57	0.5005	0.567	0.0758	0.1888	0.3683	0.668	0.998	nc	0.833	nc
AFTER 1 RUN	blk/com	10	nc	nc	0.4766	0.555	0.568	0.4993	0.566	0.076	0.1892	0.3665	0.667	0.994	nc	0.831	nc
NEW CHIP	blk/com	11	nc	nc	1.152	1.047	1.044	1.119	1.165	0.601	0.798	0.681	0.5141	1.502	nc	1.55	nc
AFTER 1 RUN	blk/com	11	nc	nc	1.12	1.013	1.011	1.087	1.133	0.588	0.787	0.669	0.5012	1.443	nc	1.522	nc
NEW CHIP	red	10	0.701	1.143	0.948	1.117	0.705	0.682	0.657	0.0756	0.1893	0.681	nc	1.22	1.118	0.838	1.12
AFTER 1 RUN	red	10	0.696	1.126	0.925	1.095	0.696	0.673	0.647	0.0766	0.1917	0.671	nc	1.195	1.092	0.829	1.094
NEW CHIP	red	11	0.4659	0.4571	0.4648	0.502	0.492	0.477	0.4791	0.4008	0.4977	0.3714	nc	0.4762	0.4689	0.4934	0.4322
AFTER 1 RUN	red	11	0.4516	0.4406	0.4473	0.4848	0.4745	0.4597	0.4602	0.3828	0.482	0.3537	nc	0.4608	0.453	0.4779	0.4157
ALI-1	blk/com	10	nc	nc	0.472	0.503	0.514	0.472	0.511	0.0672	0.1685	0.348	0.618	0.917	nc	0.753	nc
ALI-1	blk/com	11	nc	nc	0.978	0.952	0.945	1.021	1.094	0.548	0.726	0.62	0.498	1.325	nc	1.39	nc
ALI-1	red	10	0.658	1.036	0.965	1.021	0.934	0.618	0.607	0.066	0.1732	0.616	nc	1.117	1.021	0.762	1.025
ALI-1	red	11	0.4425	0.433	0.442	0.4836	0.4679	0.455	0.453	0.3709	0.4647	0.3427	nc	0.4486	0.4398	0.464	0.4066
ALI-2	blk/com	10	nc	nc	0.4516	0.4877	0.505	0.4626	0.5024	0.785	0.1755	0.3451	0.613	0.899	nc	0.755	nc
ALI-2	blk/com	11	nc	nc	0.963	0.943	0.936	1.022	1.09	0.546	0.73	0.621	0.4935	1.302	nc	1.396	nc
ALI-2	red	10	0.672	1.067	0.975	1.047	1.008	0.629	0.622	0.0749	0.177	0.62	nc	1.13	1.046	0.762	1.038
ALI-2	red	11	0.4499	0.44	0.4459	0.4885	0.4719	0.46	0.4584	0.3728	0.4706	0.3458	nc	0.4553	0.4457	0.4686	0.4101
ALI-3	blk/com	10	nc	nc	0.4611	nc	nc	nc	nc	0.0689	0.1716	0.342	0.614	0.908	nc	0.749	nc
ALI-3	blk/com	11	nc	nc	0.969	nc	nc	nc	nc	0.544	0.724	0.618	0.4943	1.241	nc	1.382	nc
ALI-3	red	10	0.657	nc	0.977	nc	nc	nc	nc	0.0693	0.1726	0.619	nc	1.12	nc	0.761	1.029
ALI-3	red	11	0.4427	nc	0.4398	nc	nc	nc	nc	0.3711	0.465	0.3409	nc	0.4478	nc	0.4632	0.406
ALI-4	blk/com	10	nc	nc	0.4528	0.4955	0.5092	0.4666	0.5061	0.0693	0.1713	1E-06	0.4914	0.913	nc	0.774	nc
ALI-4	blk/com	11	nc	nc	0.4515	0.4876	0.5025	0.4609	0.5018	0.0702	0.1728	1E-06	0.4922	0.918	nc	0.775	nc
ALI-4	red	10	0.446	0.4351	0.4402	0.4817	0.4659	0.4526	0.4515	0.0702	0.1737	1E-06	nc	0.4506	0.4427	0.4672	0.4109
ALI-4	red	11	0.4444	0.4344	0.44	0.482	0.4666	0.4526	0.451	0.0703	0.1743	1E-06	nc	0.4462	0.4732	0.4615	0.4045
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

ScratchPadData																		
ALI-5	blk/com	10	nc	nc	0.1073	0.4911	0.5055	0.4642	0.5051	0.1178	0.1887	0.2854	0.617	0.918	nc	0.781	nc	BAD
ALI-5	blk/com	11	nc	nc	0.4155	0.552	0.639	0.689	0.855	0.446	0.583	0.4168	0.4976	0.93	nc	1.133	nc	BAD
ALI-5	red	10	0.635	0.754	0.000108	0.65	0.655	0.605	0.595	0.119	0.191		0.416	0.884	0.711	0.657	0.816	BAD
ALI-5	red	11	0.4455	0.4342	0.2844	0.48	0.4641	0.4512	0.4505	0.3474	0.4406	0.2835	nc	0.448	0.4399	0.4648	0.4085	BAD

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
ALI-6	blk/com	10	nc	nc	0.46	0.4978	0.5157	0.4737	0.5118	0.1292	0.3164		0.353	0.718	0.95	nc	0.943	nc
ALI-6	blk/com	11	nc	nc	1.072	0.994	0.99	1.074	1.178	0.617	0.948			0.5068	1.406	nc	1.702	nc
ALI-6	red	10	1.017	1.198	0.561	1.12	1.136	0.725	0.717	0.1297	0.3326		0.754	nc	1.277	1.127	0.925	1.164
ALI-6	red	11	0.4565	0.4472	0.4548	0.4962	0.4971	0.4677	0.4668	0.3905	0.548	0.3585		nc	0.4664	0.4577	0.4848	0.4229
ALI-7	blk/com	10	nc	nc	0.466	0.5014	0.544	0.4779	0.541	0.1277	0.317		0.3626	0.722	0.95	nc	0.905	nc
ALI-7	blk/com	11	nc	nc	1.059	0.997	0.994	1.079	1.178	0.618	0.951	0.753		0.541	1.408	nc	1.699	nc
ALI-7	red	10	0.656	1.114	0.989	1.047	0.689	0.681	0.658	0.1287	0.3252		0.752	nc	1.257	1.069	0.916	1.095
ALI-7	red	11	0.4548	0.4461	0.4518	0.4918	0.4764	0.464	0.4634	0.3944	0.548	0.3621		nc	0.4631	0.4546	0.4807	0.422
ALI-8	blk/com	10	nc	nc	0.466	0.5002	0.543	0.4776	0.541	0.1262	0.3131		0.3629	0.719	0.946	nc	0.909	nc
ALI-8	blk/com	11	nc	nc	1.057	0.995	0.994	1.081	1.178	0.616	0.943	0.749		0.541	0.961	nc	0.971	nc
ALI-8	red	10	0.658	1.111	0.996	1.047	0.689	0.68	0.655	0.1263	0.3185		0.748	nc	1.256	1.063	0.913	1.09
ALI-8	red	11	0.4571	0.4484	0.4541	0.4943	0.479	0.4665	0.4656	0.3969	0.549	0.3644		nc	0.465	0.4572	0.4831	0.425
ALI-9	blk/com	10	nc	nc	0.4653	0.5018	0.454	0.4793	0.542	0.129	0.3184		0.366	0.728	0.957	nc	0.941	nc
ALI-9	blk/com	11	nc	nc	1.085	1.001	0.998	1.08	1.185	0.619	0.953	0.756		0.5141	1.406	nc	1.702	nc
ALI-9	red	10	0.684	1.151	1.017	1.072	0.957	0.698	0.681	0.13	0.327		0.755	nc	1.271	1.084	0.923	1.113
ALI-9	red	11	0.4599	0.4504	0.4569	0.4971	0.4821	0.4699	0.4688	0.3977	0.554	0.3642		nc	0.4667	0.4599	0.4856	0.4269
ALI-10	blk/com	10	nc	9E-05	0.4666	8.39E-05	21.01	0.544	0.556	0.055	0.4733		2.7E-06	0.0759	0.485	nc	0.996	0.000107 BAD
ALI-10	blk/com	11	nc	8.89E-05	0.4624	8.2E-05	19.5	0.513	0.548	0.054	0.481	2.7E-06		0.0769	0.4794	nc	0.997	0.000105 BAD
ALI-10	red	10	nc	9.12E-05	0.4372	8.46E-05	26.2	0.4507	0.4655	0.0433	0.4594		2.6E-06	7.77E-05	0.4425	0.4397	0.4677	0.000107 BAD
ALI-10	red	11	nc	8.9E-05	0.4365	8.2E-05	26.2	0.4508	0.4657	0.0434	0.4587	2.5E-06		7.69E-05	0.4428	0.4799	0.4675	0.000105 BAD

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16			
ALI-11	blk/com	10	nc	nc	0.4775	0.558	0.568	0.4974	0.565	0.05101	2.1E-06		1.1E-06	0.101	0.5106	nc	0.825	nc	BAD	POWER SUPPLY CIRCUIT
ALI-11	blk/com	11	nc	nc	0.477	0.559	0.568	0.4976	0.465	5.1E-05	2.7E-06	2.7E-06		0.1013	0.5105	nc	0.819	nc	BAD	POWER SUPPLY CIRCUIT
ALI-11	red	10	0.4545	0.4451	0.4553	0.4934	0.4823	0.4669	0.4683	0.4412	2E-06		1.1E-06	0.1024	0.466	0.4592	0.4837	0.4195	BAD	POWER SUPPLY CIRCUIT
ALI-11	red	11	0.452	0.441	0.4507	0.4897	0.4784	0.463	0.4644	0.0438	2.7E-06	1E-06		0.1026	0.4638	0.458	0.483	0.419	BAD	POWER SUPPLY CIRCUIT
ALI-12	blk/com	10	nc	nc	0.469	0.547	0.558	0.4881	nc	0.0702	0.1742		0.3568	0.647	0.981	nc	0.799	nc	BAD?	VREF
ALI-12	blk/com	11	nc	nc	1.107	1.015	1.013	1.077	nc	0.579	0.762	0.654		0.501	1.448	nc	1.482	nc	BAD?	VREF
ALI-12	red	10	0.964	1.108	0.564	1.085	0.751	0.667	nc	0.0705	0.1759		0.654	nc	1.179	1.096	0.808	1.09	BAD?	VREF
ALI-12	red	11	0.4525	0.442	0.4505	0.4888	0.4774	0.4625	nc	0.3814	0.4767	0.3553		nc	0.4634	0.457	0.4821	0.4181	BAD?	VREF
ALI-13	blk/com	10	nc	nc	0.469	0.549	0.558	0.487	0.554	1.3E-06	1.4E-06		1.2E-06	0.1015	0.5015	nc	0.816	nc	BAD	VREF + POWER SUPPLY CIRCUIT
ALI-13	blk/com	11	nc	nc	0.4645	0.545	0.555	0.485	0.552	1.1E-06	2.2E-06	2E-06		0.1013	0.503	nc	0.809	nc	BAD	VREF + POWER SUPPLY CIRCUIT
ALI-13	red	10	0.451	0.444	0.449	0.487	0.476	0.4599	0.4615	1.2E-06	1.3E-06		1E-06	0.102	0.4605	0.454	0.4777	0.413	BAD	VREF + POWER SUPPLY CIRCUIT
ALI-13	red	11	0.445	0.435	0.4442	0.4824	0.4712	0.4557	0.4574	1E-06	2.1E-06	1.1E-06		0.1025	0.4571	0.4507	0.476	0.4115	BAD	VREF + POWER SUPPLY CIRCUIT
ALI-14	blk/com	10	nc	nc	0.463	0.541	0.554	0.483	0.551	0.0667	0.1656		0.3511	0.352	0.974	nc	0.782	nc	BAD?	CURRENT SENSE
ALI-14	blk/com	11	nc	nc	1.094	1.007	1.009	1.069	1.117	0.571	0.745	0.643		0.4965	1.447	nc	1.446	nc	BAD?	CURRENT SENSE
ALI-14	red	10	nc	nc	0.912	1.082	0.747	0.661	0.64	0.0668	0.1665		0.644	nc	1.163	1.077	0.799	1.067	BAD?	CURRENT SENSE
ALI-14	red	11	nc	nc	0.4552	0.484	0.472	0.456	0.4586	0.375	0.467	0.351		nc	0.4595	0.454	0.4777	0.413	BAD?	CURRENT SENSE
ALI-15	blk/com	10	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	BAD	LOL
ALI-15	blk/com	11	nc	nc	1.088	0.997	0.999	1.059	1.113	0.571	nc	nc	nc	1.438	1.435	nc	1.47	nc	BAD	LOL
ALI-15	red	10	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	BAD	LOL
ALI-15	red	11	0.445	0.435	0.445	0.4833	0.4715	0.457	0.458	0.374	nc	nc	nc	nc	0.4564	0.4501	0.4744	0.4095	BAD	LOL

			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
GOOD CHIP	blk/com	10	nc	nc	0.4798	0.557	0.57	0.5005	0.567	0.0758	0.1888		0.3683	0.668	0.998	nc	0.833	nc		
ALI-1	blk/com	10	nc	nc	0.472	0.503	0.514	0.472	0.511	0.0672	0.1685		0.348	0.618	0.917	nc	0.753	nc		
ALI-2	blk/com	10	nc	nc	0.4516	0.4877	0.505	0.4626	0.5024	0.0705	0.1755		0.3451	0.613	0.899	nc	0.755	nc		
ALI-3	blk/com	10	nc	nc	0.4611	nc	nc	nc	nc	0.0689	0.1716		0.342	0.614	0.908	nc	0.749	nc	BAD	FEEDBACK BLOCK
ALI-4	blk/com	10	nc	nc	0.4528	0.4955	0.5092	0.4666	0.5061	0.0693	0.1713		1E-06	0.4914	0.913	nc	0.774	nc	BAD	POWER SUPPLY CIRCUIT
ALI-5	blk/com	10	nc	nc	0.1073	0.4911	0.5055	0.4642	0.5051	0.1178	0.1887		0.2854	0.617	0.918	nc	0.781	nc	BAD	COMPENSATION BUFFER AMPLIFIER
GOOD CHIP	blk/com	10	nc	nc	0.4798	0.557	0.57	0.5005	0.567	0.0758	0.1888		0.3683	0.668	0.998	nc	0.833	nc		
ALI-6	blk/com	10	nc	nc	0.46	0.4978	0.5157	0.4737	0.5118	0.1292	0.3164		0.353	0.718	0.95	nc	0.943	nc	BAD?	
ALI-7	blk/com	10	nc	nc	0.466	0.5014	0.544	0.4779	0.541	0.1277	0.317		0.3626	0.722	0.95	nc	0.905	nc		
ALI-8	blk/com	10	nc	nc	0.466	0.5002	0.543	0.4776	0.541	0.1262	0.3131		0.3629	0.719	0.946	nc	0.909	nc	BAD?	
ALI-9	blk/com	10	nc	nc	0.4653	0.5018	0.454	0.4793	0.542	0.129	0.3184		0.366	0.728	0.957	nc	0.941	nc		
ALI-10	blk/com	10	nc	9E-05	0.4666	8.39E-05	21.01	0.544	0.556	0.055	0.4733		2.7E-06	0.0759	0.485	nc	0.996	0.000107	BAD	

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GOOD CHIP	blk/com	10	nc	nc	0.4798	0.557	0.57	0.5005	0.567	0.0758	0.1888	0.3683	0.668	0.998	nc	0.833	nc		
ALI-11	blk/com	10	nc	nc	0.4775	0.558	0.568	0.4974	0.565	0.05101	2.1E-06	1.1E-06	0.101	0.5108	nc	0.825	nc	BAD	POWER SUPPLY CIRCUIT
ALI-12	blk/com	10	nc	nc	0.469	0.547	0.558	0.4881	nc	0.0702	0.1742	0.3568	0.647	0.981	nc	0.799	nc	WTH?	VREF
ALI-13	blk/com	10	nc	nc	0.469	0.549	0.558	0.487	0.554	1.3E-06	1.4E-06	1.2E-06	0.1015	0.5015	nc	0.816	nc	BAD	VREF + POWER SUPPLY CIRCUIT
ALI-14	blk/com	10	nc	nc	0.463	0.541	0.554	0.483	0.551	0.0667	0.1656	0.3511	0.352	0.974	nc	0.782	nc	WTH?	CURRENT SENSE
ALI-15	blk/com	10	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	BAD	LOL
GOOD CHIP	blk/com	11	nc	nc	1.152	1.047	1.044	1.119	1.165	0.601	0.798	0.681	0.5141	1.502	nc	1.55	nc		
ALI-1	blk/com	11	nc	nc	0.978	0.952	0.945	1.021	1.094	0.548	0.726	0.62	0.498	1.325	nc	1.39	nc		
ALI-2	blk/com	11	nc	nc	0.963	0.943	0.936	1.022	1.09	0.546	0.73	0.621	0.4935	1.302	nc	1.396	nc		
ALI-3	blk/com	11	nc	nc	0.969	nc	nc	nc	nc	0.544	0.724	0.618	0.4943	1.241	nc	1.382	nc	BAD	FEEDBACK BLOCK
ALI-4	blk/com	11	nc	nc	0.4515	0.4976	0.5025	0.4609	0.5018	0.0702	0.1728	1E-06	0.4922	0.918	nc	0.775	nc	BAD	POWER SUPPLY CIRCUIT
ALI-5	blk/com	11	nc	nc	0.4155	0.552	0.639	0.689	0.955	0.446	0.552	0.4168	0.4976	0.93	nc	1.139	nc	BAD	COMPENSATION BUFFER AMPLIFIER
GOOD CHIP	blk/com	11	nc	nc	1.152	1.047	1.044	1.119	1.165	0.601	0.798	0.681	0.5141	1.502	nc	1.55	nc		
ALI-6	blk/com	11	nc	nc	1.072	0.994	0.99	1.074	1.178	0.617	0.948	0.753	0.5068	1.406	nc	1.702	nc		
ALI-7	blk/com	11	nc	nc	1.059	0.997	0.994	1.079	1.178	0.618	0.951	0.753	0.541	1.408	nc	1.699	nc		
ALI-8	blk/com	11	nc	nc	1.057	0.995	0.994	1.081	1.178	0.616	0.943	0.749	0.541	0.961	nc	0.971	nc	WTH?	
ALI-9	blk/com	11	nc	nc	1.085	1.001	0.998	1.08	1.185	0.619	0.953	0.756	0.5141	1.406	nc	1.702	nc		
ALI-10	blk/com	11	nc	8.89E-05	0.4624	8.2E-05	19.5	0.513	0.548	0.054	0.481	2.7E-06	0.0769	0.4794	nc	0.997	0.000105	BAD	
GOOD CHIP	blk/com	11	nc	nc	1.152	1.047	1.044	1.119	1.165	0.601	0.798	0.681	0.5141	1.502	nc	1.55	nc		
ALI-11	blk/com	11	nc	nc	0.477	0.559	0.568	0.4976	0.405	5.1E-05	2.7E-06	2.7E-06	0.1013	0.5108	nc	0.819	nc	BAD	POWER SUPPLY CIRCUIT
ALI-12	blk/com	11	nc	nc	1.107	1.015	1.013	1.077	nc	0.579	0.762	0.654	0.501	1.448	nc	1.482	nc	WTH?	VREF
ALI-13	blk/com	11	nc	nc	0.4645	0.545	0.555	0.485	0.552	1.1E-06	2.2E-06	2E-06	0.1013	0.503	nc	0.809	nc	BAD	VREF + POWER SUPPLY CIRCUIT
ALI-14	blk/com	11	nc	nc	1.094	1.007	1.009	1.069	1.117	0.571	0.745	0.643	0.4965	1.447	nc	1.446	nc		
ALI-15	blk/com	11	nc	nc	1.088	0.997	0.999	1.059	1.113	0.571	nc	nc	1.438	1.435	nc	1.47	nc	BAD	LOL
GOOD CHIP	red	10	0.701	1.143	0.948	1.117	0.705	0.682	0.657	0.0756	0.1893	0.681	nc	1.22	1.118	0.838	1.12		
ALI-1	red	10	0.658	1.036	0.965	1.021	0.934	0.618	0.607	0.069	0.1732	0.616	nc	1.117	1.021	0.762	1.025		
ALI-2	red	10	0.672	1.067	0.975	1.047	1.008	0.629	0.622	0.0709	0.177	0.62	nc	1.13	1.046	0.762	1.038		
ALI-3	red	10	0.657	nc	0.977	nc	nc	nc	nc	0.0693	0.1726	0.619	nc	1.12	nc	0.761	1.029	BAD	FEEDBACK BLOCK
ALI-4	red	10	0.446	0.4351	0.4402	0.4817	0.4659	0.4526	0.4515	0.0702	0.1737	1E-06	nc	0.4506	0.4427	0.4672	0.4109	BAD	POWER SUPPLY CIRCUIT
ALI-5	red	10	0.635	0.754	0.000108	0.65	0.655	0.605	0.595	0.119	0.191	0.416	nc	0.884	0.711	0.657	0.816	BAD	COMPENSATION BUFFER AMPLIFIER
GOOD CHIP	red	10	0.701	1.143	0.948	1.117	0.705	0.682	0.657	0.0756	0.1893	0.681	nc	1.22	1.118	0.838	1.12		
ALI-6	red	10	1.017	1.198	0.561	1.12	1.136	0.725	0.717	0.1297	0.3326	0.754	nc	1.277	1.127	0.925	1.164		
ALI-7	red	10	0.656	1.114	0.989	1.047	0.689	0.681	0.658	0.1287	0.3252	0.752	nc	1.257	1.069	0.916	1.095		
ALI-8	red	10	0.658	1.111	0.996	1.047	0.689	0.68	0.655	0.1263	0.3185	0.748	nc	1.256	1.063	0.913	1.09		
ALI-9	red	10	0.684	1.151	1.017	1.072	0.957	0.698	0.681	0.13	0.327	0.755	nc	1.271	1.084	0.923	1.113		
ALI-10	red	10	nc	9.12E-05	0.4372	8.46E-05	26.2	0.4507	0.4655	0.0433	0.4594	2.6E-06	7.77E-05	0.4425	0.4397	0.4677	0.000107	BAD	
GOOD CHIP	red	10	0.701	1.143	0.948	1.117	0.705	0.682	0.657	0.0756	0.1893	0.681	nc	1.22	1.118	0.838	1.12		
ALI-11	red	10	0.4545	0.4451	0.4553	0.4934	0.4823	0.4669	0.4683	0.4412	2E-06	1.1E-06	0.1024	0.466	0.4592	0.4837	0.4195	BAD	POWER SUPPLY CIRCUIT
ALI-12	red	10	0.964	1.108	0.564	1.085	0.751	0.667	nc	0.0705	0.1759	0.654	nc	1.179	1.096	0.808	1.09		
ALI-13	red	10	0.451	0.444	0.449	0.487	0.476	0.4599	0.4615	1.2E-06	1.3E-06	1E-06	0.102	0.4605	0.454	0.4777	0.413	BAD	VREF + POWER SUPPLY CIRCUIT
ALI-14	red	10	nc	nc	0.912	1.082	0.747	0.661	0.64	0.0668	0.1665	0.644	nc	1.163	1.077	0.799	1.067	WTH?	CURRENT SENSE
ALI-15	red	10	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	BAD	LOL
GOOD CHIP	red	11	0.4659	0.4571	0.4648	0.502	0.492	0.477	0.4791	0.4008	0.4977	0.3714	nc	0.4762	0.4689	0.4934	0.4322		
ALI-1	red	11	0.4425	0.433	0.442	0.4836	0.4679	0.455	0.453	0.3706	0.4647	0.3427	nc	0.4486	0.4398	0.464	0.4066		
ALI-2	red	11	0.4499	0.44	0.4459	0.4885	0.4719	0.46	0.4584	0.3728	0.4706	0.3458	nc	0.4553	0.4457	0.4686	0.4101		
ALI-3	red	11	0.4427	nc	0.4398	nc	nc	nc	nc	0.3711	0.465	0.3409	nc	0.4478	nc	0.4632	0.406	BAD	FEEDBACK BLOCK
ALI-4	red	11	0.4444	0.4344	0.44	0.482	0.4666	0.4526	0.451	0.0703	0.1743	1E-06	nc	0.4462	0.4732	0.4615	0.4045	BAD	POWER SUPPLY CIRCUIT
ALI-5	red	11	0.4455	0.4342	0.2844	0.48	0.4641	0.4512	0.4505	0.3474	0.4406	0.2835	nc	0.448	0.4399	0.4648	0.4085	BAD	COMPENSATION BUFFER AMPLIFIER
GOOD CHIP	red	11	0.4659	0.4571	0.4648	0.502	0.492	0.477	0.4791	0.4008	0.4977	0.3714	nc	0.4762	0.4689	0.4934	0.4322		
ALI-6	red	11	0.4565	0.4472	0.4548	0.4962	0.4971	0.4677	0.4668	0.3905	0.548	0.3585	nc	0.4664	0.4577	0.4848	0.4229		
ALI-7	red	11	0.4548	0.4461	0.4518	0.4918	0.4764	0.464	0.4634	0.3944	0.548	0.3621	nc	0.4631	0.4546	0.4807	0.422		
ALI-8	red	11	0.4571	0.4484	0.4541	0.4943	0.479	0.4665	0.4656	0.3969	0.549	0.3644	nc	0.465	0.4572	0.4831	0.425		
ALI-9	red	11	0.4599	0.4504	0.4569	0.4971	0.4821	0.4699	0.4688	0.3977	0.554	0.3642	nc	0.4667	0.4599	0.4856	0.4269		
ALI-10	red	11	nc	8.9E-05	0.4365	8.2E-05	26.2	0.4508	0.4657	0.0434	0.4587	2.5E-06	7.89E-05	0.4428	0.4799	0.4675	0.000105	BAD	
GOOD CHIP	red	11	0.4659	0.4571	0.4648	0.502	0.492	0.477	0.4791	0.4008	0.4977	0.3714	nc	0.4762	0.4689	0.4934	0.4322		
ALI-11	red	11	0.452	0.441	0.4507	0.4897	0.4784	0.463	0.4644	0.0438	2.7E-06	1E-06	0.1026	0.4638	0.458	0.483	0.419	BAD	POWER SUPPLY CIRCUIT
ALI-12	red	11	0.4525	0.442	0.4505	0.4888	0.4774	0.4625	nc	0.3814	0.4767	0.3553	nc	0.4634	0.457	0.4821	0.4181	WTH?	VREF
ALI-13	red	11	0.445	0.435	0.4442	0.4824	0.4712	0.4557	0.4574	1E-06	2.1E-06	1.1E-06	0.1025	0.4571	0.4507	0.476	0.4115	BAD	VREF + POWER SUPPLY CIRCUIT
ALI-14	red	11	nc	nc	0.4552	0.484	0.472	0.456	0.4586	0.375	0.467	0.351	nc	0.4595	0.454	0.4777	0.413	WTH?	CURRENT SENSE
ALI-15	red	11	0.445	0.435	0.445	0.4833	0.4715	0.457	0.458	0.374	nc	nc	nc	0.4564	0.4501	0.4744	0.4095	BAD	LOL

RESISTANCE FROM PIN (n) TO GROUND PIN 10

blk/com - 10	GOOD CHIP	ALI-1	ERROR	ALI-2	ERROR	ALI-3	ERROR	ALI-4	ERROR	ALI-5	ERROR
red/test - 1	nc	nc	0%	nc	0%	nc	0%	nc	0%	nc	0%
red/test - 2	nc	nc	0%	nc	0%	nc	0%	nc	0%	nc	0%

AVERA	GOOD CHIP	ALI-1	ALI-2	MAX DEVIATION
nc	nc			
nc	nc			

red/test - 3	0.4798	0.472	2%	0.4516	6%	0.4611	4%	0.4528	6%	0.1073	78%
red/test - 4	0.557	0.503	10%	0.4877	12%	nc	100%	0.4955	11%	0.4911	12%
red/test - 5	0.57	0.514	10%	0.505	11%	nc	100%	0.5092	11%	0.5055	11%
red/test - 6	0.5005	0.472	6%	0.4626	8%	nc	100%	0.4666	7%	0.4642	7%
red/test - 7	0.567	0.511	10%	0.5024	11%	nc	100%	0.5061	11%	0.5051	11%
red/test - 8	0.0758	0.0672	11%	0.0705	7%	0.0689	9%	0.0693	9%	0.1178	-55%
red/test - 9	0.1888	0.1685	11%	0.1755	7%	0.1716	9%	0.1713	9%	0.1887	0%
X	X	X	X	X	X	X	X	X	X	X	X
red/test - 11	0.3683	0.348	6%	0.3451	6%	0.342	7%	1E-06	100%	0.2854	23%
red/test - 12	0.668	0.618	7%	0.613	8%	0.614	8%	0.4914	26%	0.617	8%
red/test - 13	0.998	0.917	8%	0.899	10%	0.908	9%	0.913	9%	0.918	8%
red/test - 14	nc	nc	0%	nc	0%	nc	0%	nc	0%	nc	0%
red/test - 15	0.833	0.753	10%	0.755	9%	0.749	10%	0.774	7%	0.781	6%
red/test - 16	nc	nc	0%	nc	0%	nc	0%	nc	0%	nc	0%

0.4678	-3%	-1%	3%	6%
0.5159	-8%	3%	5%	13%
0.5297	-8%	3%	5%	13%
0.4784	-5%	1%	3%	8%
0.5268	-8%	3%	5%	13%
0.0712	-6%	6%	1%	12%
0.1776	-6%	5%	1%	11%
nc				
0.3538	-4%	2%	2%	6%
0.6330	-6%	2%	3%	9%
0.9380	-6%	2%	4%	10%
nc				
0.7803	-7%	3%	3%	10%
nc				

RESISTANCE FROM PIN (n) TO VOLTS SUPPLY PIN 11

blk/com - 11	GOOD CHIP	ALI-1	ERROR	ALI-2	ERROR	ALI-3	ERROR	ALI-4	ERROR	ALI-5	ERROR
red/test - 1	nc	nc	0%	nc	0%	nc	0%	nc	0%	nc	0%
red/test - 2	nc	nc	0%	nc	0%	nc	0%	nc	0%	nc	0%
red/test - 3	1.152	0.978	15%	0.963	16%	0.969	16%	0.4515	61%	0.4155	64%
red/test - 4	1.047	0.952	9%	0.943	10%	nc	100%	0.4876	53%	0.552	47%
red/test - 5	1.044	0.945	9%	0.936	10%	nc	100%	0.5025	52%	0.639	39%
red/test - 6	1.119	1.021	9%	1.022	9%	nc	100%	0.4609	59%	0.689	38%
red/test - 7	1.165	1.094	6%	1.09	6%	nc	100%	0.5018	57%	0.855	27%
red/test - 8	0.601	0.548	9%	0.546	9%	0.544	9%	0.0702	88%	0.446	26%
red/test - 9	0.798	0.726	9%	0.73	9%	0.724	9%	0.1728	78%	0.583	27%
red/test - 10	0.681	0.62	9%	0.621	9%	0.618	9%	1E-06	100%	0.4168	39%
X	X	X	X	X	X	X	X	X	X	X	X
red/test - 12	0.5141	0.498	3%	0.4935	4%	0.4943	4%	0.4922	4%	0.4976	3%
red/test - 13	1.502	1.325	12%	1.302	13%	1.241	17%	0.918	39%	0.93	38%
red/test - 14	nc	nc	0%	nc	0%	nc	0%	nc	0%	nc	0%
red/test - 15	1.55	1.39	10%	1.396	10%	1.382	11%	0.775	50%	1.133	27%
red/test - 16	nc	nc	0%	nc	0%	nc	0%	nc	0%	nc	0%

nc				
nc				
1.0310	-12%	5%	7%	19%
0.9807	-7%	3%	4%	11%
0.9750	-7%	3%	4%	11%
1.0540	-6%	3%	3%	9%
1.1163	-4%	2%	2%	6%
0.5650	-6%	3%	3%	9%
0.7513	-6%	3%	3%	9%
0.6407	-6%	3%	3%	9%
0.5019	-2%	1%	2%	4%
1.3763	-9%	4%	5%	14%
nc				
1.4453	-7%	4%	3%	11%
nc				

RESISTANCE FROM GROUND PIN 10 TO PIN(n)

red/test - 10	GOOD CHIP	ALI-1	ERROR	ALI-2	ERROR	ALI-3	ERROR	ALI-4	ERROR	ALI-5	ERROR
blk/com - 1	0.701	0.658	6%	0.672	4%	0.657	6%	0.446	36%	0.635	9%
blk/com - 2	1.143	1.036	9%	1.067	7%	nc	100%	0.4351	62%	0.754	34%
blk/com - 3	0.948	0.965	-2%	0.975	-3%	0.977	-3%	0.4402	54%	0.000108	100%
blk/com - 4	1.117	1.021	9%	1.047	6%	nc	100%	0.4817	57%	0.65	42%
blk/com - 5	0.705	0.934	-32%	1.008	-43%	nc	100%	0.4659	34%	0.655	7%
blk/com - 6	0.682	0.618	9%	0.629	8%	nc	100%	0.4526	34%	0.605	11%
blk/com - 7	0.657	0.607	8%	0.622	5%	nc	100%	0.4515	31%	0.595	9%
blk/com - 8	0.0756	0.069	9%	0.0709	6%	0.0693	8%	0.0702	7%	0.119	-57%
blk/com - 9	0.1893	0.1732	9%	0.177	6%	0.1726	9%	0.1737	8%	0.191	-1%
X	X	X	X	X	X	X	X	X	X	X	X
blk/com - 11	0.681	0.616	10%	0.62	9%	0.619	9%	1E-06	100%	0.416	39%
blk/com - 12	nc	nc	0%	nc	0%	nc	0%	nc	0%	nc	0%
blk/com - 13	1.22	1.117	8%	1.13	7%	1.12	8%	0.4506	63%	0.884	28%
blk/com - 14	1.118	1.021	9%	1.046	6%	nc	100%	0.4427	60%	0.711	36%
blk/com - 15	0.838	0.762	9%	0.762	9%	0.761	9%	0.4672	44%	0.657	22%
blk/com - 16	1.12	1.025	8%	1.038	7%	1.029	8%	0.4109	63%	0.816	27%

0.6770	-4%	3%	1%	7%
1.0820	-6%	4%	1%	10%
0.9627	2%	0%	-1%	3%
1.0617	-5%	4%	1%	9%
0.8823	20%	-6%	-14%	34%
0.6430	-6%	4%	2%	10%
0.6287	-5%	3%	1%	8%
0.0718	-5%	4%	1%	9%
0.1798	-5%	4%	2%	9%
0.6390	-7%	4%	3%	11%
1.1557	-6%	3%	2%	9%
1.0617	-5%	4%	1%	9%
0.7873	-6%	3%	3%	9%
1.0610	-6%	3%	2%	9%

RESISTANCE FROM VOLTS SUPPLY PIN 11 TO PIN(n)

red/test - 11	GOOD CHIP	ALI-1	ERROR	ALI-2	ERROR	ALI-3	ERROR	ALI-4	ERROR	ALI-5	ERROR
blk/com - 1	0.4659	0.4425	5%	0.4499	3%	0.4427	5%	0.4444	5%	0.4455	4%
blk/com - 2	0.4571	0.433	5%	0.44	4%	nc	100%	0.4344	5%	0.4342	5%
blk/com - 3	0.4648	0.442	5%	0.4459	4%	0.4398	5%	0.44	5%	0.2844	39%
blk/com - 4	0.502	0.4836	4%	0.4885	3%	nc	100%	0.482	4%	0.48	4%
blk/com - 5	0.492	0.4679	5%	0.4719	4%	nc	100%	0.4666	5%	0.4641	6%
blk/com - 6	0.477	0.455	5%	0.46	4%	nc	100%	0.4526	5%	0.4512	5%
blk/com - 7	0.4791	0.453	5%	0.4584	4%	nc	100%	0.451	6%	0.4505	6%
blk/com - 8	0.4008	0.3706	8%	0.3728	7%	0.3711	7%	0.0703	82%	0.3474	13%
blk/com - 9	0.4977	0.4647	7%	0.4706	5%	0.465	7%	0.1743	65%	0.4406	11%
blk/com - 10	0.3714	0.3427	8%	0.3458	7%	0.3409	8%	1E-06	100%	0.2835	24%
X	X	X	X	X	X	X	X	X	X	X	X
blk/com - 12	nc	nc	0%	nc	0%	nc	0%	nc	0%	nc	0%
blk/com - 13	0.4762	0.4486	6%	0.4553	4%	0.4478	6%	0.4462	6%	0.448	6%
blk/com - 14	0.4689	0.4398	6%	0.4457	5%	nc	100%	0.4732	-1%	0.4399	6%
blk/com - 15	0.4934	0.464	6%	0.4686	5%	0.4632	6%	0.4615	6%	0.4648	6%
blk/com - 16	0.4322	0.4066	6%	0.4101	5%	0.406	6%	0.4045	6%	0.4085	5%

0.4528	-3%	2%	1%	5%
0.4434	-3%	2%	1%	5%
0.4509	-3%	2%	1%	5%
0.4917	-2%	2%	1%	4%
0.4773	-3%	2%	1%	5%
0.4640	-3%	2%	1%	5%
0.4635	-3%	2%	1%	5%
0.3814	-5%	3%	2%	8%
0.4777	-4%	3%	1%	7%
0.3533	-5%	3%	2%	8%
0.4600	-4%	2%	1%	6%
0.4515	-4%	3%	1%	7%
0.4753	-4%	2%	1%	6%
0.4163	-4%	2%	1%	6%