

NIM-C13D

Reliability Prediction Report (MTBF)

Summary	Failure Rate: 2294.267728 MTBF: 435,869 Hours
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Issue date	QE Manager	Test Engineer
2017-03-24	KJ Wang	Max Chang

Reliability Prediction (MTBF)

I . Model Name: NIM-C13D

II . Prediction Date: March, 24, 2017

III . Prediction Site: AAEON Q.E. Dept.

IV . Predicted by: Max Chang

V . Equipment: Windchill Quality Solutions 10.1

VI. Simulation Environment:

- Temperature: 30 degrees C
- Standard: Telcordia (Bellcore) Standard

VII. Term and Definition:

- Unit : An assembly of device.
- Duty Cycle : Used to specify the percentage of time that the element is in an on state, and it is equal to the percentage of total time the item is in the active environment.
- Quantity : The quantity of the selected item.
- Failure Rate : Used to specify that the failure rate is to be calculated based the selected Calculation models. The Failure rate multiplier is 1000000000.
- MTBF : MTBF is always specified in hours.

VIII. Prediction Result:

NIM-C13D (9697C13D00-D):

- Failure Rate: 2294.267728

- MTBF: 435,869 Hours

**Reliability Prediction
Summary**

File Name: NIM-C13D.rfp
System: 9697C13D00-D
Ref Des:
Description:

Failure Rate: 2294.267728
MTBF (hrs): 435,869
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Assembly Name	Part Number	Ref Des	Quantity	Failure Rate	MTBF
NIM-C13D	9697C13D00-D		1	2294.267728	435,869

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Part Number	Category	Ref Des	Unit Failure Rate	Quantity	Total Failure Rate
1050510034	Resistor	R345,R346,R440	2.547039	3	9.343982
1050516004	Resistor	R101,R102,R104,R107,R109,R129,R130,R133,R134,R136,R138,R139,R142,R350,R351,R476,R477,R96,R97,R99	2.547039	20	55.234238
105A500139	Resistor	R159,R237,R337	2.547039	3	9.343982
105A501039	Resistor	R152,R153,R155,R156,R157,R158,R160,R229,R231,R232,R234,R235,R304,R305,R332,R341,R342	2.547039	17	47.258036
105A501529	Resistor	R67	2.547039	1	3.541821
105A501539	Resistor	R347	2.547039	1	3.541821
105A503309	Resistor	R467,R469	2.547039	2	6.490186
105A523713	Resistor	R60	2.547039	1	3.541821
105A530113	Resistor	R61	2.547039	1	3.541821
105A547509	Resistor	R466	2.547039	1	3.541821
105A549969	Resistor	R468,R472	2.547039	2	6.490186

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105A700009	Resistor	R110,R111,R113,R114,R115,R116,R117,R118,R119,R120,R121,R122,R123,R124,R125,R126,R143,R144,R145,R146,R147,R148,R149,R150,R151,R154,R233,R306,R330,R331,R334,R335,R338,R348,R421,R422,R423,R424,R425,R426,R427,R429,R431,R445,R475,R480,R481,R484,R	2.547039	59	157.649551
105A700139	Resistor	R141,R447,R448,R451	2.547039	4	12.149228
105A700239	Resistor	R343,R344	2.547039	2	6.490186

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105A701039	Resistor	R24,R26,R27,R28,R29,R30,R31,R32,R33,R339,R356,R357,R358,R359,R36,R360,R361,R362,R363,R367,R38,R39,R40,R42,R43,R441,R454,R455,R456,R457,R458,R459,R460,R461,R65, R66	2.547039	36	97.453680
105A703309	Resistor	R23	2.547039	1	3.541821
105A703329	Resistor	R46,R47,R51,R52,R54,R55,R57,R58,R59,R69,R70,R72,R74	2.547039	13	36.573004
111161019B	Capacitor	C580,C581	1.128806	2	2.664608
1121610060	Capacitor	C224,C225,C229,C230	1.128806	4	5.079407
1124427090	Capacitor	C39,C41	1.128806	2	2.664608
1129522790	Capacitor	C111,C112,C217,C220	1.128806	4	5.079407
1129601080	Capacitor	C45,C51,C57,C63,C66,C72,C77,C84,C89	1.128806	9	11.005528
1129610260	Capacitor	C221,C23,C28,C35	1.128806	4	5.079407
1129710090	Capacitor	C40	1.128806	1	1.418485

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1129710390	Capacitor	C47,C48,C53,C54,C55,C56,C59,C60,C61,C68,C69,C70,C79,C80,C81,C82,C91,C92	1.128806	18	21.515320
1189656193	Capacitor	C578,C579	1.128806	2	2.664608
11C2510480	Capacitor	C226,C228,C576,C577	1.128806	4	5.079407
11C4501790	Capacitor	C227,C232,C234,C237,C46,C52,C58,C62,C67,C71,C78,C83,C90	1.128806	13	15.691573
11C9510050	Capacitor	C582,C583	1.128806	2	2.664608

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11C9510490	Capacitor	C10,C100, C101,C10 2, C103,C10 4,C105, C106,C10 7,C108, C109,C11, C110,C11 3, C114,C12, C13,C14, C15,C16,C 17,C19, C21,C218, C219,C22, C231,C23 5,C239,C2 4, C240,C24 4,C245, C248,C24 9,C25,C27 C29,C30,C 31,C33, C34,C36,C 38,C7,C8, C9,C93,C9 4,C95,C96 C97,C98,C 99	1.128806	54	63.028462
11E1547650	Capacitor	C223,C23 8,C241	1.128806	3	3.883281
11E9501091	Capacitor	C20,C26,C 32,C37	1.128806	4	5.079407
11E9610080	Capacitor	C44,C50,C 64,C73, C76,C85,C 88	1.128806	7	8.647986
11EA647010	Capacitor	C43,C49,C 65,C74, C75,C86,C 87	1.128806	7	8.647986
121110336L	Inductor	L33,L34	4.944252	2	12.019077
1212306030	Inductor	FB1,FB16, FB17,FB2, FB3,FB4,F B5,FB6, FB7	4.944252	9	48.914484

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12123C001A	Inductor	FB18,FB19,FB20	4.944252	3	17.432754
123132505D	Miscellaneous	Y1	19.200000	1	41.938810
1301005442	Semiconductor	D1	7.793411	1	10.775013
1304100250	Optical Device	LED1	79.003355	1	153.913100
1315070020	Semiconductor	Q23,Q24,Q25,Q26,Q27,Q28,Q29,Q30,Q31,Q32,Q33,Q34,Q35,Q36,Q37,Q38	22.463360	16	394.664315
1315230511	Semiconductor	Q2,Q3,Q4,Q5	22.463360	4	107.867794
1315733410	Semiconductor	Q21,Q22	22.463360	2	57.753076
1315970211	Integrated Circuit	U4,U5	43.803003	2	146.310248
1440038080	Integrated Circuit	U7	43.803003	1	85.184662
1440350AM0	Integrated Circuit	U11	43.803003	1	85.184662
14S3003700	Integrated Circuit	TF1,TF2,TF3,TF4	43.803003	4	257.787974
14S4622700	Integrated Circuit	U13	43.803003	1	85.184662
14S4910400	Integrated Circuit	U16	43.803003	1	85.184662
14S6325600	Integrated Circuit	U14	43.803003	1	85.184662
1540775082	Resistor	RP1,RP2,RP3,RP4	9.971436	4	58.653237
1652848204	Connection	CN27	16.184835	1	28.022514
1751300006	Relay	RELAY1,RELAY10,RELAY11,RELAY12,RELAY13,RELAY14,RELAY15,RELAY16,RELAY2,RELAY3,RELAY4,RELAY5,RELAY6,RELAY7,RELAY8,RELAY9	19.477355	16	371.779977