

NIM-C13B

Reliability Prediction Report (MTBF)

Summary	Failure Rate: 3060.053936 MTBF: 326.792 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-C13B

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-C13B (9697C13B00-D):

- Failure Rate: 3060.053936

- MTBF: 326,792 Hours

**Reliability Prediction
Summary**

File Name: NIM-C13B.rfp
System: 9697C13B00-D
Ref Des:
Description:

Failure Rate: 3060.053936
MTBF (hrs): 326,792
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Assembly Name	Part Number	Ref Des	Quantity	Failure Rate	MTBF
NIM-C13B	9697C13B00-D		1	3060.053936	326,792

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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,R250,R251,R253,R254,R257,R258,R261,R262,R280,R283,R284,R285,R288,R289,R294,R295,R350,R351,R96,R97,R99	2.547039	34	92.197308
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	R221,R67	2.547039	2	6.490186
105A501539	Resistor	R347	2.547039	1	3.541821
105A503309	Resistor	R467,R469,R470,R471	2.547039	4	12.149228
105A523713	Resistor	R214,R60	2.547039	2	6.490186
105A530113	Resistor	R215,R61	2.547039	2	6.490186
105A547509	Resistor	R466	2.547039	1	3.541821
105A549969	Resistor	R468,R472,R473,R474	2.547039	4	12.149228

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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,R199,R217,R230,R233,R236,R238,R239,R240,R241,R242,R243,R244,R245,R246,R247,R264,R265,R266,R267,R268,R269,R270,	2.547039	104	274.682632
105A700139	Resistor	R447,R448,R451	2.547039	3	9.343982
105A700239	Resistor	R343,R344	2.547039	2	6.490186

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105A701039	Resistor	R178,R180,R181,R182,R183,R184,R185,R186,R187,R190,R191,R192,R193,R194,R195,R196,R24,R26,R27,R28,R29,R30,R31,R32,R33,R339,R356,R357,R358,R359,R36,R360,R361,R362,R363,R364,R365,R366,R367,R368,R369,R37,R370,R371,R38,R39,R40,R42,R43,R441,R454,R4	2.547039	58	155.039752
105A703309	Resistor	R177,R23	2.547039	2	6.490186
105A703329	Resistor	R200,R201,R205,R206,R208,R209,R211,R212,R213,R223,R224,R228,R46,R47,R51,R52,R54,R55,R57,R58,R59,R69,R70,R74	2.547039	24	65.832183
1111610199	Capacitor	C580,C581	1.128806	2	2.664608
1121610060	Capacitor	C224,C225,C229,C230	1.128806	4	5.079407

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1124427090	Capacitor	C147,C149,C39,C41	1.128806	4	5.079407
1129522790	Capacitor	C111,C112,C217,C220	1.128806	4	5.079407
1129601080	Capacitor	C153,C159,C165,C171,C174,C180,C185,C192,C197,C45,C51,C57,C63,C66,C72,C77,C84,C89	1.128806	18	21.515320
1129610260	Capacitor	C125,C131,C136,C145,C221,C23,C28,C35	1.128806	8	9.828323
1129710090	Capacitor	C148,C40	1.128806	2	2.664608
1129710390	Capacitor	C155,C156,C161,C162,C163,C164,C167,C168,C169,C176,C177,C178,C187,C188,C189,C190,C199,C200,C47,C48,C53,C54,C55,C56,C59,C60,C61,C68,C69,C70,C79,C80,C81,C82,C91,C92	1.128806	36	42.329563
1189656193	Capacitor	C578,C579	1.128806	2	2.664608
11C2510480	Capacitor	C226,C228,C576,C577	1.128806	4	5.079407

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11C4501790	Capacitor	C154,C160,C166,C170,C175,C179,C186,C191,C198,C227,C232,C234,C237,C46,C52,C58,C62,C67,C71,C78,C83,C90	1.128806	22	26.156857
11C9510050	Capacitor	C582,C583	1.128806	2	2.664608
11C9510490	Capacitor	C10,C100,C101,C102,C103,C104,C105,C106,C107,C108,C109,C11,C110,C113,C114,C115,C116,C117,C118,C119,C12,C120,C121,C122,C123,C124,C126,C128,C129,C13,C130,C132,C134,C135,C137,C138,C139,C14,C141,C142,C143,C144,C15,C16,C17,C19,C201,C202,C203,C204,C223,C238,C241	1.128806	94	108.842737
11E1547650	Capacitor	C223,C238,C241	1.128806	3	3.883281

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11E9501091	Capacitor	C127,C133,C140,C146,C20,C26,C32,C37	1.128806	8	9.828323
11E9610080	Capacitor	C152,C158,C172,C181,C184,C193,C196,C44,C50,C64,C73,C76,C85,C88	1.128806	14	16.858773
11EA647010	Capacitor	C151,C157,C173,C182,C183,C194,C195,C43,C49,C65,C74,C75,C86,C87	1.128806	14	16.858773
121110336L	Inductor	L33,L34	4.944252	2	12.019077
1212306030	Inductor	FB1,FB10,FB11,FB12,FB13,FB14,FB16,FB17,FB2,FB3,FB4,FB5,FB6,FB7,FB8,FB9	4.944252	16	84.996318
12123C001A	Inductor	FB18,FB19,FB20	4.944252	3	17.432754
123132505D	Miscellaneous	Y1,Y2	19.200000	2	112.942642
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
1440580EB0	Integrated Circuit	U11,U12	43.803003	2	146.310248

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14S3003700	Integrated Circuit	TF1,TF2,T F3,TF4, TF5,TF6,T F7,TF8	43.803003	8	466.317038
14S4622700	Integrated Circuit	U13	43.803003	1	85.184662
14S4910400	Integrated Circuit	U16	43.803003	1	85.184662
14S6325600	Integrated Circuit	U14,U15	43.803003	2	146.310248
1540775082	Resistor	RP1,RP2,R P3,RP4, RP5,RP6,R P7,RP8	9.971436	8	106.111062
1652896201	Connection	CN17	16.184835	1	28.022514
1751300006	Relay	RELAY1,R ELAY10, RELAY11, RELAY12, RELAY13, RELAY14, RELAY15, RELAY16, RELAY2,R ELAY3, RELAY4,R ELAY5, RELAY6,R ELAY7, RELAY8,R ELAY9	19.477355	16	371.779977