

NIM-S13B

Reliability Prediction Report (MTBF)

Summary	Failure Rate: 3349.364731 MTBF: 298.564 Hours
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Issue date	QE Manager	Test Engineer
2017-04-14	KJ Wang	Max Chang

Reliability Prediction (MTBF)

I . Model Name: NIM-S13B

II . Prediction Date: April, 14, 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-S13B (9697S13B00-D):

- Failure Rate: 3349.364731

- MTBF: 298,564 Hours

**Reliability Prediction
Summary**

File Name: NIM-S13B.rfp
System: 9697S13B00-D
Ref Des:
Description:

Failure Rate: 3349.364731
MTBF (hrs): 298,564
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Assembly Name	Part Number	Ref Des	Quantity	Failure Rate	MTBF
NIM-S13B	9697S13B00-D		1	3349.364731	298,564

File Name: NIM-S13B.rfp
Assembly: 9697S13B00-D
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Part Number	Category	Ref Des	Unit Failure Rate	Quantity	Total Failure Rate
1050501054	Resistor	R458	2.547039	1	3.541821
1050504724	Resistor	R431	2.547039	1	3.541821
1050504764	Resistor	R456	2.547039	1	3.541821
1050507524	Resistor	R97	2.547039	1	3.541821
1050510034	Resistor	R242,R45 5	2.547039	2	6.490186
1050516004	Resistor	R374,R37 5,R376, R377,R37 8,R379, R380,R38 1,R382, R383,R38 4,R385, R386,R38 7,R388, R389,R39 2,R393, R394,R39 5,R396, R397,R39 8,R399, R400,R40 1,R402, R403,R41 0,R411, R412,R41 3	2.547039	32	86.936089
1050549904	Resistor	R457	2.547039	1	3.541821
1050549934	Resistor	R1116	2.547039	1	3.541821
1050700002	Resistor	R130,R27	2.547039	2	6.490186
105A501139	Resistor	R76	2.547039	1	3.541821
105A501529	Resistor	R29,R38	2.547039	2	6.490186
105A501539	Resistor	R240	2.547039	1	3.541821
105A502039	Resistor	R1120	2.547039	1	3.541821
105A503309	Resistor	R25,R26,R 41,R42	2.547039	4	12.149228
105A506829	Resistor	R71	2.547039	1	3.541821
105A509133	Resistor	R1121	2.547039	1	3.541821
105A523713	Resistor	R325,R33 0	2.547039	2	6.490186
105A530113	Resistor	R169,R17 0	2.547039	2	6.490186
105A533223	Resistor	R81,R92	2.547039	2	6.490186
105A546423	Resistor	R99	2.547039	1	3.541821
105A547509	Resistor	R253	2.547039	1	3.541821
105A549969	Resistor	R233,R23 4,R266, R267	2.547039	4	12.149228

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105A700003	Resistor	R104,R109,R1122,R1123,R1124,R512,R54	2.547039	7	20.411813
105A700009	Resistor	R10,R100,R101,R102,R105,R106,R107,R108,R11,R110,R111,R112,R113,R114,R115,R116,R117,R118,R119,R12,R120,R121,R122,R123,R124,R125,R126,R127,R128,R129,R133,R134,R135,R136,R137,R138,R139,R140,R142,R145,R151,R153,R155,R156,R16,R165,R17,R171,R18,R18	2.547039	103	272.088410
105A700139	Resistor	R14,R141	2.547039	2	6.490186

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105A701039	Resistor	R103,R146,R147,R148,R149,R150,R159,R161,R162,R163,R164,R187,R188,R193,R195,R201,R203,R207,R209,R220,R226,R227,R235,R236,R238,R239,R249,R250,R251,R252,R255,R258,R263,R268,R271,R275,R283,R297,R311,R320,R321,R329,R344,R351,R356,R361,R369,R371,R	2.547039	59	157.649551
105A703309	Resistor	R57,R65	2.547039	2	6.490186

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105A703329	Resistor	R194,R196,R202,R222,R256,R257,R261,R262,R270,R288,R290,R294,R295,R301,R307,R308,R309,R310,R314,R315,R32,R323,R345,R348,R352,R353,R354,R357,R36,R360,R362,R367,R368,R37,R370,R406,R50,R55,R62	2.547039	40	107.953424
105A703363	Resistor	R426,R83	2.547039	2	6.490186
105A708229	Resistor	R190,R198,R205,R210,R224,R343,R350,R363	2.547039	8	23.134533
105A747009	Resistor	R186,R208,R213,R218,R223,R346,R355,R407	2.547039	8	23.134533
111161019C	Capacitor	C1,C2	1.128806	2	2.664608
1124427090	Capacitor	C33,C34,C37,C38	1.128806	4	5.079407

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1129601080	Capacitor	C138,C139,C140,C150,C151,C153,C167,C171,C185,C186,C200,C216,C217,C219,C233,C234,C236,C239,C327	1.128806	19	22.676921
1129710090	Capacitor	C35,C36	1.128806	2	2.664608
1129710390	Capacitor	C143,C144,C145,C146,C149,C154,C155,C157,C159,C160,C166,C173,C174,C177,C179,C181,C182,C183,C189,C192,C194,C195,C198,C199,C202,C204,C205,C214,C220,C222,C224,C225,C227,C228,C230,C231	1.128806	36	42.329563
1189633151	Capacitor	C142,C232	1.128806	2	2.664608
1189656196	Capacitor	C334	1.128806	1	1.418485
11C2510480	Capacitor	C125,C126	1.128806	2	2.664608
11C2522480	Capacitor	C873	1.128806	1	1.418485

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11C4501790	Capacitor	C147,C148,C152,C156,C158,C161,C165,C170,C175,C180,C190,C193,C201,C215,C221,C223,C226,C229	1.128806	18	21.515320
11C4522191	Capacitor	C329	1.128806	1	1.418485
11C9510050	Capacitor	C130,C4	1.128806	2	2.664608
11C9510490	Capacitor	C10,C100,C104,C105,C109,C11,C113,C114,C12,C127,C128,C129,C13,C135,C136,C15,C16,C17,C18,C19,C20,C21,C22,C23,C241,C242,C245,C247,C25,C257,C258,C30,C317,C320,C322,C323,C326,C328,C340,C341,C40,C5,C6,C7,C8,C83,C85,C87,C88,C9,C97,C99	1.128806	52	60.732100

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11E1510050	Capacitor	C106,C107,C111,C112,C243,C244,C246,C248,C254,C255,C318,C319,C321,C324,C332,C333,C335,C337,C342,C81,C82,C84,C86,C89,C90,C91,C92	1.128806	27	31.943551
11E2501690	Capacitor	C108,C31	1.128806	2	2.664608
11E2522090	Capacitor	C911	1.128806	1	1.418485
11E9501091	Capacitor	C28	1.128806	1	1.418485
11E9547681	Capacitor	C27	1.128806	1	1.418485
11E9610080	Capacitor	C162,C163,C168,C172,C176,C178,C187,C191,C203,C206,C207,C218,C235,C238,C24,C3,C32,C39	1.128806	18	21.515320
11E9622080	Capacitor	C325,C330	1.128806	2	2.664608
11EA647010	Capacitor	C137,C141,C164,C169,C184,C188,C208,C209,C210,C211,C212,C213,C237,C240	1.128806	14	16.858773
121110156P	Inductor	L2	4.944252	1	6.461578
121110226X	Inductor	L3	4.944252	1	6.461578
1211110062	Inductor	L1	4.944252	1	6.461578

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1212306030	Inductor	FB21,FB2 2,FB23, FB24,FB2 5,FB26, FB27,FB2 8,FB29, FB30,FB3 1,FB32, FB34,FB3 5	4.944252	14	74.727516
1212308054	Inductor	FB10,FB1 1,FB12, FB15,FB1 6,FB17, FB18,FB4 0,FB41, FB42,FB4 3,FB7,FB8 FB86,FB8 8,FB9	4.944252	16	84.996318
12123A0009	Inductor	FB2,FB33, FB45,FB4 6	4.944252	4	22.772366
12123C001A	Inductor	FB1,FB19, FB20	4.944252	3	17.432754
123132505D	Miscellaneous	Y1,Y2	19.200000	2	112.942642
1304200043	Optical Device	LED10,LE D11,LED1 2, LED13,LE D14,LED1 5, LED16,LE D17,LED1 8, LED19,LE D20,LED5, LED6,LED 7,LED8, LED9	79.003355	16	1558.632109
1315060301	Semiconductor	Q1,Q5	22.463360	2	57.753076
1315070020	Semiconductor	Q15	22.463360	1	31.602965
1315200312	Semiconductor	Q13,Q14, Q3,Q4	22.463360	4	107.867794
1430006710	Integrated Circuit	U100	43.803003	1	85.184662
1440038080	Integrated Circuit	U6	43.803003	1	85.184662
1440580EB0	Integrated Circuit	U4,U5	43.803003	2	146.310248
14S3112400	Integrated Circuit	U3	43.803003	1	85.184662
14S4910400	Integrated Circuit	U2	43.803003	1	85.184662
14S6325600	Integrated Circuit	U8,U9	43.803003	2	146.310248

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1654916030	Connection	CN2	16.184835	1	28.022514