

NIM-S26A

Reliability Prediction Report (MTBF)

Summary	Failure Rate: 4047.376817 ppm MTBF: 247,074 Hours
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Issue date

QE Manager

Test Engineer

2016/07/28

KJ Wang

Jack Huang

Reliability Prediction (MTBF)

I . Model Name: NIM-S26A

II . Prediction Date: JUL. 28, 2016

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

IV . Predicted by: Jack Huang

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-S26A(9697S26A03-D):

- Failure Rate:4047.376817 ppm

- MTBF: 247.074 Hours

**AAEON Reliability Prediction
Summary**

File Name: NIM-S26A.rfp
Duty Cycle: 100
Calculation Model: Telcordia Issue 2
Method: Method I Case 3

Failure Rate: 4047.376817
MTBF (hrs): 247,074
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Assembly Name	Part Number	Ref Des	Quantity	Failure Rate	MTBF
NIM-S26A	9697S26A03-D		1	4047.376817	247,074

File Name: NIM-S26A.rfp
Assembly: 9697S26A03-D
Ref Des:
Description:

Failure Rate: 4047.376817
MTBF (hrs): 247,074
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1050501004	Resistor	R154,R161,R189, R191,R66,R70,R75, R80		2.547039	8	43225424.698300
1050501054	Resistor	R259		2.547039	1	282340674.079668
1050501534-00	Resistor	R265		2.547039	1	282340674.079668
1050502204	Resistor	R182,R194,R88,R90, R95,R99		2.547039	6	56573956.677649
1050503324	Resistor	R153,R162,R188, R190,R60,R69,R74, R79		2.547039	8	43225424.698300
1050504724	Resistor	R299		2.547039	1	282340674.079668
1050505134-00	Resistor	R271		2.547039	1	282340674.079668
1050508224	Resistor	R183,R199,R50,R51, R52,R57,R68,R71, R72,R73,R77,R78, R87,R91,R92,R96		2.547039	16	22425139.809646
1050510034	Resistor	R115,R150,R192, R193,R195,R196, R202,R282,R283,R83, R84,R89		2.547039	12	29507083.749401
1050524004	Resistor	R105,R106,R107, R108,R109,R110, R111,R112		2.547039	8	43225424.698300
1050561934	Resistor	R289		2.547039	1	282340674.079668
1050700002	Resistor	R253,R257,R275		2.547039	3	107020754.986850
105A447510	Resistor	R47		2.547039	1	282340674.079668
105A500103	Resistor	R268,R286		2.547039	2	154078778.388085
105A500139	Resistor	R102		2.547039	1	282340674.079668
105A501039	Resistor	R273,R86		2.547039	2	154078778.388085
105A501529	Resistor	R212,R217		2.547039	2	154078778.388085
105A502263	Resistor	R260		2.547039	1	282340674.079668
105A503309	Resistor	R44,R45		2.547039	2	154078778.388085

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105A508223	Resistor	R219,R220,R221, R222,R223,R224, R230,R234,R235, R236,R237,R238, R239,R240,R244, R245		2.547039	16	22425139.809646
105A510009	Resistor	R149,R158,R163, R170,R176,R177, R184,R197,R201,R54, R55,R58,R82,R85, R93		2.547039	15	23852782.943395
105A510223	Resistor	R290		2.547039	1	282340674.079668
105A514014	Resistor	R272		2.547039	1	282340674.079668
105A545323	Resistor	R288		2.547039	1	282340674.079668
105A547509	Resistor	R39		2.547039	1	282340674.079668
105A549969	Resistor	R121,R122		2.547039	2	154078778.388085
105A700003	Resistor	R255,R263,R270, R280,R296,R297		2.547039	6	56573956.677649
105A700009	Resistor	R10,R103,R104,R11, R114,R117,R119,R12, R15,R16,R17,R18, R19,R20,R200,R22, R225,R228,R229,R23, R231,R233,R241, R243,R246,R249, R252,R262,R264, R266,R277,R284, R293,R298,R300,R5, R6,R7,R8,R9		2.547039	40	9263254.152485
105A700139	Resistor	R1,R13,R285,R4		2.547039	4	82309758.689546

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105A701039	Resistor	R120,R25,R26,R27,R28,R40,R41,R42,R43		2.547039	9	38754445.632391
105A710039	Resistor	R274,R287,R292		2.547039	3	107020754.986850
105A747009	Resistor	R210,R215,R232,R242		2.547039	4	82309758.689546
1121501691	Capacitor	C248,C254,C259		1.128806	3	257514172.353070
1129710391	Capacitor	C251,C262		1.128806	2	375289731.076049
1189656196	Capacitor	C249,C269		4.744484	2	86049450.747498
118A6221B0	Capacitor	C261		4.744484	1	159663026.715137
11A4420080	Capacitor	C31,C32		1.128806	2	375289731.076049
11C1410440	Capacitor	C135,C30,C33,C34,C35,C36,C37,C38,C39,C40,C57,C58,C59,C60,C61,C62,C63,C64,C65,C66,C67,C68,C69,C70,C71,C72		1.128806	26	32480878.530766
11C2510480	Capacitor	C245,C4,C5,C6		1.128806	4	196873384.410843
11C4522290	Capacitor	C253,C264		1.128806	2	375289731.076049
11C4547190	Capacitor	C73,C74,C75,C76,C77,C78,C79,C80		1.128806	8	101746760.035398
11C9510050	Capacitor	C154,C155,C162,C163,C179,C180,C201,C202,C260,C7,C84		1.128806	11	74892583.279796
11C9510490	Capacitor	C10,C12,C13,C8,C83,C9		1.128806	6	133979725.056342
11E1510050	Capacitor	C266,C268,C270		1.128806	3	257514172.353070
11E2501080	Capacitor	C246,C247		1.128806	2	375289731.076049
11E2501690	Capacitor	C255,C256,C271,C500		1.128806	4	196873384.410843
11E2510010	Capacitor	C243,C244,C257,C258		1.128806	4	196873384.410843
11E4547610	Capacitor	C265		1.128806	1	704977644.692287

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11E9522490	Capacitor	C14,C15,C16 ,C17, C18,C19,C20 ,C21, C22,C23,C24 ,C25, C26,C27,C28 ,C29		1.128806	16	52112480.802928
11E9610080	Capacitor	C250		1.128806	1	704977644.692287
11E9622050	Capacitor	C213,C222,C 223, C224,C225,C 226, C227,C41,C4 2,C43, C44,C45,C46 ,C47, C48,C49,C50 ,C51, C52,C53,C54 ,C55, C56,C98		1.128806	24	35120617.936543

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11EB501040	Capacitor	C100,C101,C102, C103,C104,C105, C106,C107,C108, C109,C110,C115, C119,C120,C121, C122,C123,C124, C125,C126,C127, C128,C129,C130, C134,C136,C137, C138,C139,C140, C141,C142,C143, C144,C145,C146, C147,C148,C149, C156,C157,C158, C159,C161,C164, C165,C166,C167,		1.128806	99	8729159.738216
121110106Z	Inductor	L2		4.944252	1	154760964.143460
121110156P	Inductor	L3		4.944252	1	154760964.143460
121110226X	Inductor	L4		4.944252	1	154760964.143460
1212308054	Inductor	FB10,FB3,FB4,FB5, FB6,FB7,FB8,FB9		4.944252	8	22874049.098230
12123A000B	Inductor	FB12,FB14,FB15		4.944252	3	57363284.375370
12123C001A	Inductor	FB1,FB11,FB2		4.944252	3	57363284.375370
123132505D	Miscellaneous	Y1		19.200000	1	23844262.770939
1301005440	Semiconductor	D1		7.793411	1	92807310.010983
1304200043	Optical Device	LED10,LED4,LED6, LED8		79.003355	4	2148119.082046
1304300140	Optical Device	LED3,LED5,LED7, LED9		79.003355	4	2148119.082046
1315060300	Semiconductor	Q1,Q2,Q7,Q8		22.463360	4	9270607.712006
1315070020	Semiconductor	Q5		22.463360	1	31642600.748419

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1430082021	Integrated Circuit	U12		43.803003	1	11739202.588727
1440038080	Integrated Circuit	U5		43.803003	1	11739202.588727
14400X7102	Integrated Circuit	U3		43.803003	1	11739202.588727
1463S26A00	Integrated Circuit	U2		43.803003	1	11739202.588727
14S2321900	Integrated Circuit	U11		43.803003	1	11739202.588727
14S4910400	Integrated Circuit	U6		43.803003	1	11739202.588727
1654902037	Miscellaneous	CN4,CN5,CN6,CN7		306.000000	4	555577.066683
1655004018	Miscellaneous	CN3		306.000000	1	1681683.006787