

AIS-E2

Reliability Prediction Report (MTBF)

Summary	Failure Rate: 9374.915677 ppm MTBF: 106,668 Hours
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Issue date	Approval	Test Engineer
2013/07/22	Tom Lin	Jack Huang

Reliability Prediction (MTBF)

I . Model Name: AIS-E2

II . Prediction Date: July. 22, 2013

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:

AIS-E2 (9697QM772A-D):

- Failure Rate: 9374.915677 ppm

- MTBF: 106,668 Hours

**AAEON Reliability Prediction
Summary**

File Name: AIS-E2.rfp
Duty Cycle: 100
Calculation Model: Telcordia Issue 2
Method: Method I Case 3

Failure Rate: 9374.915677
MTBF (hrs): 106,668
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Assembly Name	Part Number	Ref Des	Quantity	Failure Rate	MTBF
AIS-E2	SYSTEM		1	9374.915677	106,668
ASS'Y.EMB-QM77.Rev.A1.0			1	9374.915677	106,668

File Name: AIS-E2.rfp
 Assembly:
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Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
02043-000901MI	Integrated Circuit	U38		43.803003	1	11739202.588727
07G003001211	Semiconductor	Q64,Q65,Q66,Q67,Q84		7.793411	5	21965031.404253
1050501234	Resistor	R364,R366		2.547039	2	154078778.388085
1050502204	Resistor	R138,R251,R252,R253,R529,R530,R531,R532,R775,R781,R807		2.547039	11	32049696.385471
1050504724	Resistor	R441,R445		2.547039	2	154078778.388085
1050504734	Resistor	R157,R469,R704		2.547039	3	107020754.986850
1050505124	Resistor	R407		2.547039	1	282340674.079668
1050505164	Resistor	R135		2.547039	1	282340674.079668
1050505604	Resistor	R318,R823		2.547039	2	154078778.388085
1050505633	Resistor	R240		2.547039	1	282340674.079668
1050506224	Resistor	R43,R9		2.547039	2	154078778.388085
1050507530	Resistor	R160,R166,R93		2.547039	3	107020754.986850
1050510034	Resistor	R169,R215,R217,R219,R289,R31,R32,R359,R415,R52,R663,R683,R809,R810		2.547039	14	25477245.255648
1050510534	Resistor	R411		2.547039	1	282340674.079668
1050512104	Resistor	R955		2.547039	1	282340674.079668
1050512734	Resistor	R73		2.547039	1	282340674.079668
1050513334	Resistor	R78		2.547039	1	282340674.079668
1050519114	Resistor	R266,R339		2.547039	2	154078778.388085
1050520004	Resistor	R161,R61,R956		2.547039	3	107020754.986850
1050520034	Resistor	R116,R684		2.547039	2	154078778.388085
1050524904	Resistor	R193,R205		2.547039	2	154078778.388085
1050527424	Resistor	R314,R336		2.547039	2	154078778.388085
1050533034	Resistor	R191,R197		2.547039	2	154078778.388085
1050533214	Resistor	R245		2.547039	1	282340674.079668
1050536514	Resistor	R274,R347,R348,R349,R774		2.547039	5	67008142.102588
1050538314	Resistor	R829,R843		2.547039	2	154078778.388085
1050539214	Resistor	R948,R950		2.547039	2	154078778.388085
1050540224	Resistor	R238,R246		2.547039	2	154078778.388085
1050548714	Resistor	R652		2.547039	1	282340674.079668

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1050557604	Resistor	R324		2.547039	1	282340674.079668
1050557614	Resistor	R848		2.547039	1	282340674.079668
1050584514	Resistor	R98,R99		2.547039	2	154078778.388085
1050702734	Resistor	R935		2.547039	1	282340674.079668
1050704304	Resistor	R271,R831		2.547039	2	154078778.388085
1051501582	Resistor	R724		2.547039	1	282340674.079668
1052500171	Resistor	R737,R744		2.547039	2	154078778.388085
105270000A	Resistor	R372		2.547039	1	282340674.079668
1054700289	Resistor	R620		2.547039	1	282340674.079668
1059700001	Resistor	R64,R873,R881		2.547039	3	107020754.986850
1059701001	Resistor	R296		2.547039	1	282340674.079668
1059701031	Resistor	TC53		2.547039	1	282340674.079668
1059702261	Resistor	R408,R719,R769, R870,R882		2.547039	5	67008142.102588
105A500133	Resistor	R428,R634,R826, R894		2.547039	4	82309758.689546
105A500139	Resistor	R145,R175,R181, R188,R198,R211, R227,R25,R26,R292, R293,R360,R403, R405,R450,R456,R48, R50,R53,R54,R545, R55,R556,R56,R57, R59,R601,R603,R619, R631,R647,R665,R67, R689,R709,R780, R816,R83,R85,R86, R861,R890,R95		2.547039	43	8634227.613564
105A501033	Resistor	R351,R354		2.547039	2	154078778.388085

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105A501039	Resistor	R103,R118,R129, R130,R140,R147, R148,R154,R156, R177,R185,R199, R201,R203,R226, R236,R243,R247, R254,R255,R256, R353,R424,R434, R447,R461,R536, R581,R586,R608, R609,R664,R668, R670,R675,R686, R687,R690,R699,		2.547039	62	6043178.840887
105A501139	Resistor	R280,R329		2.547039	2	154078778.388085
105A501223	Resistor	R921,R926		2.547039	2	154078778.388085
105A501529	Resistor	R231		2.547039	1	282340674.079668
105A501533	Resistor	R889		2.547039	1	282340674.079668
105A501539	Resistor	R229,R239,R856		2.547039	3	107020754.986850
105A502033	Resistor	R553,R917		2.547039	2	154078778.388085
105A502039	Resistor	R214,R218,R244, R368,R860		2.547039	5	67008142.102588
105A502833	Resistor	R409		2.547039	1	282340674.079668
105A503033	Resistor	R628		2.547039	1	282340674.079668
105A503039	Resistor	R242,R857,R859		2.547039	3	107020754.986850
105A503309	Resistor	R224,R483,R751, R754		2.547039	4	82309758.689546
105A503323	Resistor	R839		2.547039	1	282340674.079668
105A503333	Resistor	R387,R427		2.547039	2	154078778.388085
105A503423	Resistor	R912,R913		2.547039	2	154078778.388085
105A505109	Resistor	R222,R225,R230, R235,R770		2.547039	5	67008142.102588
105A505123	Resistor	R924		2.547039	1	282340674.079668
105A505629	Resistor	R412		2.547039	1	282340674.079668
105A506823	Resistor	R627		2.547039	1	282340674.079668

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105A506829	Resistor	R77		2.547039	1	282340674.079668
105A507509	Resistor	R263,R320		2.547039	2	154078778.388085
105A509123	Resistor	R385,R386,R425, R426		2.547039	4	82309758.689546
105A510009	Resistor	R22,R312,R316,R36, R584,R662,R76,R8		2.547039	8	43225424.698300
105A511823	Resistor	R221		2.547039	1	282340674.079668
105A513009	Resistor	R321,R69,R828		2.547039	3	107020754.986850
105A514009	Resistor	R84		2.547039	1	282340674.079668
105A515009	Resistor	R267,R268,R269, R491,R493,R495		2.547039	6	56573956.677649
105A516933	Resistor	R785		2.547039	1	282340674.079668
105A518223	Resistor	R413		2.547039	1	282340674.079668
105A522123	Resistor	R383		2.547039	1	282340674.079668
105A522663	Resistor	R220		2.547039	1	282340674.079668
105A523713	Resistor	R758		2.547039	1	282340674.079668
105A524913	Resistor	R457		2.547039	1	282340674.079668
105A525563	Resistor	R183		2.547039	1	282340674.079668
105A526114	Resistor	R277,R338		2.547039	2	154078778.388085
105A526733	Resistor	R258,R837		2.547039	2	154078778.388085
105A527403	Resistor	R285		2.547039	1	282340674.079668
105A534813	Resistor	R462		2.547039	1	282340674.079668
105A537463	Resistor	R732		2.547039	1	282340674.079668
105A539003	Resistor	R170,R540		2.547039	2	154078778.388085
105A539203	Resistor	R822		2.547039	1	282340674.079668
105A539213	Resistor	R257		2.547039	1	282340674.079668
105A544213	Resistor	R388		2.547039	1	282340674.079668
105A549903	Resistor	R793		2.547039	1	282340674.079668
105A549919	Resistor	R91		2.547039	1	282340674.079668
105A549963	Resistor	R725		2.547039	1	282340674.079668
105A549969	Resistor	R195		2.547039	1	282340674.079668
105A566519	Resistor	R367,R864		2.547039	2	154078778.388085
105A571513	Resistor	R418		2.547039	1	282340674.079668
105A575003	Resistor	R869		2.547039	1	282340674.079668
105A575009	Resistor	R146,R182		2.547039	2	154078778.388085
105A588703	Resistor	R836		2.547039	1	282340674.079668
105A590963	Resistor	R265		2.547039	1	282340674.079668
105A597603	Resistor	R814		2.547039	1	282340674.079668

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105A700003	Resistor	R108,R109,R132, R163,R200,R213, R259,R283,R294, R297,R322,R352, R370,R390,R392, R422,R423,R432, R433,R448,R470, R471,R472,R474, R476,R477,R480, R655,R656,R658, R706,R717,R735, R819,R865,R868, R871,R875,R878,		2.547039	46	8085699.252497
105A700009	Resistor	R100,R101,R102, R126,R133,R139, R152,R155,R167, R168,R172,R173, R179,R18,R184,R192, R202,R209,R249, R272,R273,R288, R298,R299,R300, R303,R304,R305, R306,R307,R308, R309,R319,R327,R33, R333,R334,R335, R346,R357,R362,		2.547039	129	2945750.678104
105A700109	Resistor	R313		2.547039	1	282340674.079668

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105A700239	Resistor	R275,R325,R738		2.547039	3	107020754.986850
105A701003	Resistor	R394,R410		2.547039	2	154078778.388085
105A701009	Resistor	R149,R241,R264, R281,R282,R311, R315,R330,R331, R342,R343,R344, R397,R752,R755		2.547039	15	23852782.943395
105A701033	Resistor	R10,R377,R38,R419, R429,R430,R624, R625,R626,R638, R639,R640,R74,R893, R923		2.547039	15	23852782.943395
105A701039	Resistor	R111,R112,R113, R114,R164,R165,R19, R21,R210,R23,R234, R24,R376,R382,R414, R416,R417,R438, R454,R466,R515, R593,R621,R637, R649,R654,R665, R672,R794,R853, R854,R855,R862, R874,R879,R951		2.547039	36	10261285.143207
105A701053	Resistor	R216,R262		2.547039	2	154078778.388085
105A701059	Resistor	R233		2.547039	1	282340674.079668
105A701069	Resistor	R204		2.547039	1	282340674.079668
105A701533	Resistor	R12,R420,R421,R44, R82		2.547039	5	67008142.102588
105A701539	Resistor	R107,R11,R47		2.547039	3	107020754.986850

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105A702229	Resistor	R1,R110,R123,R124,R125,R128,R142,R144,R151,R158,R16,R162,R27,R270,R302,R516,R526,R558,R559,R574,R577,R63,R705,R710,R723,R730,R795,R796,R797,R798,R799,R800,R801,R802,R803,R804,R805,R909,R910		2.547039	39	9493970.778443
105A702233	Resistor	R568,R570		2.547039	2	154078778.388085
105A702263	Resistor	R398,R399,R643,R711,R713,R867,R872,R876,R877,R880		2.547039	10	35079934.879747
105A703329	Resistor	R15,R51		2.547039	2	154078778.388085
105A703953	Resistor	R380		2.547039	1	282340674.079668
105A704334	Resistor	R688		2.547039	1	282340674.079668
105A704729	Resistor	R279,R28,R356,R358,R482,R484,R512,R543,R544,R555,R600,R820,R89,R898		2.547039	14	25477245.255648
105A705129	Resistor	R134,R3,R30,R616,R642		2.547039	5	67008142.102588
105A705139	Resistor	R541,R542		2.547039	2	154078778.388085
105A706209	Resistor	R827		2.547039	1	282340674.079668
105A707503	Resistor	R548,R550,R569,R571,R572,R575		2.547039	6	56573956.677649
105A707509	Resistor	R490,R492,R494		2.547039	3	107020754.986850

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105A708229	Resistor	R153,R187,R194, R557,R595,R661, R693,R727,R763, R764,R765,R767, R783		2.547039	13	27342571.921361
105A710039	Resistor	R106,R115,R131, R150,R365,R374, R378,R389,R552, R561,R75,R957		2.547039	12	29507083.749401
105A715003	Resistor	R473,R478		2.547039	2	154078778.388085
105A720009	Resistor	R68		2.547039	1	282340674.079668
105A730009	Resistor	R578,R579,R596, R597		2.547039	4	82309758.689546
105A733003	Resistor	R514,R527,R594, R599		2.547039	4	82309758.689546
105A747009	Resistor	R580,R590,R591, R592		2.547039	4	82309758.689546
105A747033	Resistor	R646		2.547039	1	282340674.079668
106B701031	Resistor	RT3		2.547039	1	282340674.079668
106B701032	Resistor	RT1,RT2,RT5, RT7		2.547039	4	82309758.689546
106B747030	Resistor	RT4,RT6		2.547039	2	154078778.388085
111161019B	Capacitor	EC14,EC23,EC32, EC33		4.744484	4	45505862.704531
1121415090	Capacitor	C40		1.128806	1	704977644.692287

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1121501690	Capacitor	BC1,BC10,BC100, BC101,BC102,BC103, BC104,BC105,BC106, BC107,BC108,BC109, BC11,BC110,BC111, BC112,BC113,BC114, BC115,BC116,BC117, BC118,BC119,BC12, BC120,BC123,BC124, BC125,BC126,BC13, BC131,BC132,BC135, BC136,BC137,BC138, BC139,BC14,BC14		1.128806	219	3977992.553876
1121610060	Capacitor	TC10,TC11,TC12, TC13,TC14,TC15, TC16,TC41,TC42, TC43,TC44,TC49,TC6, TC75,TC89,TC9,TC90, TC91,TC92		1.128806	19	44097696.883526
1121647480	Capacitor	C339		1.128806	1	704977644.692287
1121747890	Capacitor	C33		1.128806	1	704977644.692287
1122522890	Capacitor	C144,C235,C344		1.128806	3	257514172.353070
1124410191	Capacitor	C208,C209,C210, C212,C379,C380		1.128806	6	133979725.056342
1124418090	Capacitor	C106,C108,C79,C85		1.128806	4	196873384.410843

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1124418190	Capacitor	C10,C11,C12 ,C14, C15,C16,C18 ,C19, C195,C196,C 197, C198,C199,C 202, C382,C383		1.128806	16	52112480.802928
1124427091	Capacitor	C168,C170,C 180, C181		1.128806	4	196873384.410843
1124433090	Capacitor	C167,C171,C 375, C376		1.128806	4	196873384.410843
1124433190	Capacitor	C218,C328		1.128806	2	375289731.076049
1124468090	Capacitor	C100		1.128806	1	704977644.692287
1124518280	Capacitor	C161,C349,C 362		1.128806	3	257514172.353070
1124522190	Capacitor	C200,C203,C 205, C207		1.128806	4	196873384.410843
1124533280	Capacitor	C20,C34		1.128806	2	375289731.076049
1124547190	Capacitor	C327,C337		1.128806	2	375289731.076049
1124582880	Capacitor	C330,C350,C 363		1.128806	3	257514172.353070
1129610051	Capacitor	TC1,TC17,TC 18,TC19, TC2,TC20,TC 21,TC22, TC23,TC24,T C26, TC27,TC28,T C29,TC3, TC30,TC31,T C32, TC33,TC34,T C35, TC36,TC37,T C38, TC39,TC4,TC 40,TC45, TC46,TC47,T C48,TC5, TC50,TC51,T C52, TC54,TC56,T C57, TC58,TC59,T C60, TC61,TC62,T C63,		1.128806	75	11480604.167884

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1129710090	Capacitor	C172,C173,C174, C182,C183,C188, C190,C192,C373, C374		1.128806	10	82101057.548118
1129710390	Capacitor	C119,C120,C152, C164,C193,C244, C319,C348,C352, C353,C355,C356, C360		1.128806	13	63728475.410842
1129747091	Capacitor	C132,C160,C322		1.128806	3	257514172.353070
1169656192	Capacitor	EC10,EC11,E C12, EC13,EC15,E C16, EC17,EC18,E C19, EC21,EC5,EC6,EC7, EC8		4.744484	14	13902256.772671
1181610191	Capacitor	EC29,EC3		4.744484	2	86049450.747498
1181610196	Capacitor	EC25,EC26,E C27, EC28,EC4,EC9		4.744484	6	31179134.677521
1189633162	Capacitor	C215,C224,C233,C32		4.744484	4	45505862.704531
1189656196	Capacitor	EC1,EC2,EC20,EC22, EC30,EC31		4.744484	6	31179134.677521
1189933180	Capacitor	C26		4.744484	1	159663026.715137
11C1501080	Capacitor	C165,C364,C365, C368		1.128806	4	196873384.410843
11C1522480	Capacitor	C332,C345,C361		1.128806	3	257514172.353070
11C1533890	Capacitor	C23		1.128806	1	704977644.692287
11C2522650	Capacitor	C124,C125		1.128806	2	375289731.076049
11C2568880	Capacitor	C154		1.128806	1	704977644.692287

File Name: AIS-E2.rfp
Assembly:
Ref Des:
Description:

Failure Rate: 9374.915677
MTBF (hrs): 106,668
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
11C4501790	Capacitor	C1,C112,C18 5,C2, C206,C21,C2 2,C238, C239,C24,C2 40,C241, C25,C27,C28 ,C3,C30, C303,C304,C 31,C37, C4,C44,C5,C 6,C8,C9		1.128806	27	31305223.485317
11C4515190	Capacitor	C104,C143		1.128806	2	375289731.076049
11C4568190	Capacitor	C343		1.128806	1	704977644.692287
11E1522680	Capacitor	C184,C228,C 369,C7		1.128806	4	196873384.410843
11E2647650	Capacitor	C234		1.128806	1	704977644.692287
11E9501091	Capacitor	C115,C116,C 118, C131,C138,C 140, C147,C155,C 158, C159,C162,C 169,C17, C175,C186,C 194, C201,C204,C 219, C220,C221,C 222, C227,C229,C 230, C231,C246,C 248, C249,C250,C 251, C252,C253,C 254, C265,C266,C 267, C268,C269,C 270,		1.128806	84	10266401.768736
11E9522680	Capacitor	C214,C216,C 217, C223,C225,C 226, C236		1.128806	7	115633865.771428

**Reliability Prediction
Summary**

File Name: AIS-E2.rfp
Assembly:
Ref Des:
Description:

Failure Rate: 9374.915677
MTBF (hrs): 106,668
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
11E9522790	Capacitor	C102,C103,C105, C107,C110,C111, C113,C114,C117, C121,C123,C133, C134,C135,C136, C141,C142,C145, C146,C149,C150, C151,C153,C166, C329,C43,C45,C52, C54,C56,C57,C58, C60,C64,C75,C76, C78,C82,C87,C89, C93,C95		1.128806	42	20309512.293448
11E9547680	Capacitor	C211,C213,C357, C358,C384,C385,C59		1.128806	7	115633865.771428

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Failure Rate: 9374.915677
MTBF (hrs): 106,668
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Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
11E9622050	Capacitor	C101,C126,C127, C128,C129,C130, C232,C255,C256, C257,C258,C259, C260,C261,C262, C263,C277,C282, C283,C286,C287, C289,C290,C295, C297,C299,C301, C302,C305,C306, C307,C308,C309, C310,C311,C312, C313,C314,C333,		1.128806	62	13849042.265233
11E9722090	Capacitor	C187,C189,C191, C371		1.128806	4	196873384.410843
1211000180	Inductor	L7		4.944252	1	154760964.143460
1211100114	Inductor	L11,L12,L15,L38, L39		4.944252	5	35631881.582999
1211100160	Inductor	L37		4.944252	1	154760964.143460
1211103370	Inductor	L20,L22		4.944252	2	83201062.149749
1211103671	Inductor	L19,	14.7	6.449201	1	118646823.537383
1211103671	Inductor	L13,L17,L18,L9		4.944252	4	43912872.424775
121110476P	Inductor	L23,L40		4.944252	2	83201062.149749
1211105675	Inductor	L3		4.944252	1	154760964.143460
1211106874	Inductor	L10,L16		4.944252	2	83201062.149749
121230805X	Inductor	FB16,FB2,FB29,FB3, FB30,FB32,F B34,FB4, FB5,FB6,FB8,FB9		4.944252	12	15520616.516984
12123C000A	Inductor	FB1,FB17,FB18,FB19, FB20,FB23,F B24, FB31		4.944252	8	22874049.098230

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Failure Rate: 9374.915677
MTBF (hrs): 106,668
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Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
12123C000C	Inductor	FB10,FB11,F B12, FB13,FB14,F B15		4.944252	6	30055900.223009
12123C0031	Inductor	FB21,FB22,F B25, FB26,FB27,F B28		4.944252	6	30055900.223009
121430900A	Inductor	L24,L25,L26, L27, L28,L29,L30, L31		4.944252	8	22874049.098230
12143B0002	Inductor	L1,L2,L32,L3 3,L34, L35,L36,L4,L 5,L6		4.944252	10	18485101.557872
123132505D	Miscellaneous	Y2,Y3,Y4		19.200000	3	5742504.738137
1231332721	Miscellaneous	Y1		19.200000	1	23844262.770939
13010014L0	Semiconductor	D67,D70		7.793411	2	50578095.223398
1301005440	Semiconductor	D17,D20,D21 ,D25, D26,D46,D63 ,Q86		7.793411	8	14161142.003130
1301005442	Semiconductor	D11,D12,D13 ,D27		7.793411	4	26989084.126235
1301053040	Semiconductor	D14,D15,D16		7.793411	3	35106858.962001
1301SX3440	Semiconductor	D28,D29		7.793411	2	50578095.223398
1304101540	Optical Device	LED1,LED2		79.003355	2	3783722.582110
1305040241	Semiconductor	D1,D10,D2,D 22,D23, D24,D3,D30, D31,D32, D33,D34,D35 ,D36, D37,D38,D39 ,D4,D40, D41,D42,D43 ,D44, D45,D47,D48 ,D49,D5, D50,D51,D52 ,D53, D54,D55,D56 ,D57, D58,D59,D6, D64,D65, D66,D7,D8,D 9		7.793411	45	2702592.969964
1310039040	Semiconductor	Q32,Q6,Q77, Q83		22.463360	4	9270607.712006
131411171J	Semiconductor	Q89		22.463360	1	31642600.748419

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Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1314895510	Semiconductor	U20	26.1	43.811630	1	16223982.888440
1315013810	Semiconductor	Q30		22.463360	1	31642600.748419
1315200312	Semiconductor	Q20,Q23,Q26,Q27,Q35,Q36,Q38,Q5,Q7		22.463360	9	4366472.106532
1315230114	Semiconductor	Q33		22.463360	1	31642600.748419
1315230511	Semiconductor	Q31		22.463360	1	31642600.748419
1315700217	Semiconductor	Q1,Q10,Q12,Q13,Q15,Q16,Q17,Q18,Q19,Q2,Q34,Q4,Q53,Q54,Q55,Q56,Q57,Q58,Q59,Q60,Q61,Q62,Q63,Q68,Q69,Q70,Q71,Q72,Q76,Q8,Q81,Q9,Q90		22.463360	33	1262760.774886
1315805710	Semiconductor	Q14,Q22,Q25,Q29,Q39,Q41,Q48,Q49,Q50,Q51,Q52		22.463360	11	3618924.681337
1315806511	Semiconductor	Q11,Q21,Q24,Q28,Q40,Q44,Q45,Q46,Q47,Q73,Q74,Q78,Q79,Q80		22.463360	14	2878021.548809
14S2083600	Integrated Circuit	U24		43.803003	1	11739202.588727
14S2200900	Integrated Circuit	U41		43.803003	1	11739202.588727
14S3066200	Integrated Circuit	U46	17.4	140.342063	1	3663992.954200
14S3102000	Integrated Circuit	U60		43.803003	1	11739202.588727
14S3104500	Integrated Circuit	U45,U50,U51,U52,U53,U54		43.803003	6	2750969.191556
14S3111600	Integrated Circuit	U11		43.803003	1	11739202.588727
14S3111702	Integrated Circuit	U61		43.803003	1	11739202.588727
14S3121800	Integrated Circuit	U8		43.803003	1	11739202.588727
14S3524700	Integrated Circuit	Q75		43.803003	1	11739202.588727
14S3587000	Integrated Circuit	U10,U33		43.803003	2	6834791.244197
14S3917900	Integrated Circuit	U19		43.803003	1	11739202.588727
14S4021301	Integrated Circuit	U1,U40		43.803003	2	6834791.244197

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Assembly:
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MTBF (hrs): 106,668
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Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
14S4048501	Integrated Circuit	U63,U64		43.803003	2	6834791.244197
14S4257900	Integrated Circuit	U39		43.803003	1	11739202.588727
14S4519500	Integrated Circuit	U57		43.803003	1	11739202.588727
14S4622800	Integrated Circuit	U36		43.803003	1	11739202.588727
14S4872800	Integrated Circuit	U6		43.803003	1	11739202.588727
14S4963502	Integrated Circuit	U55		43.803003	1	11739202.588727
14S4QM7700	Integrated Circuit	U16	19.9	164.197257	1	3131674.292170
14S5812502	Integrated Circuit	U48		26.018600	1	25551442.237972
14S5912300	Integrated Circuit	U58		26.018600	1	25551442.237972
14S5A00702	Integrated Circuit	U12,U21,U9		26.018600	3	9949526.289768
14S5A00704	Integrated Circuit	U28,U4,U7		26.018600	3	9949526.289768
14S5A00802	Integrated Circuit	U2,U26,U27, U3		26.018600	4	7696979.559193
14S5A00821	Integrated Circuit	U13,U25,U30 ,U56		26.018600	4	7696979.559193
14S5A01400	Integrated Circuit	U47		26.018600	1	25551442.237972
14S5A12506	Integrated Circuit	U62		26.018600	1	25551442.237972
14S5A73200	Integrated Circuit	U32		26.018600	1	25551442.237972
14S62EM770	Integrated Circuit	U5		11.063278	1	58231413.220643
14S6334610	Integrated Circuit	U59		43.803003	1	11739202.588727
14S9108500	Integrated Circuit	U22,U31		43.803003	2	6834791.244197
14S9144200	Integrated Circuit	U42,U43		43.803003	2	6834791.244197
14S9301200	Integrated Circuit	U34		43.803003	1	11739202.588727
14S9620800	Integrated Circuit	U14,U37		43.803003	2	6834791.244197
1540710280	Resistor	RP1,RP2,RP3		9.971436	3	21639329.074793
1540722280	Resistor	RP5		9.971436	1	51606907.671214
1540733082	Resistor	RP4		9.971436	1	51606907.671214
16515A0982	Connection	DIMM1,DIM M2		16.184835	2	20390152.380746
1651609883	Connection	U15		16.184835	1	35685591.360212
1652517209	Connection	AUDIO1		16.184835	1	35685591.360212
1652532207	Connection	USB_LAN1,U SB_LAN2		16.184835	2	20390152.380746
1653003201	Connection	JP3,JP5		16.184835	2	20390152.380746
1653004202	Connection	CN17		16.184835	1	35685591.360212
165300420L	Connection	CN4		16.184835	1	35685591.360212
1653005202	Connection	DIO1,USB1,U SB2, USB3		16.184835	4	11344857.509064
165300520V	Connection	CN3		16.184835	1	35685591.360212
165320520W	Connection	COM1		16.184835	1	35685591.360212
1653207204	Connection	LPC1		16.184835	1	35685591.360212
165320820G	Connection	CN8		16.184835	1	35685591.360212
1653300102	Connection	JP1(1-2),JP4 (2-3)		16.184835	2	20390152.380746
1653300107	Connection	JP3(1-3),JP3 (4-6), JP5(3 -4)		16.184835	3	14515880.849373

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 Assembly:
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 MTBF (hrs): 106,668
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Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1653300108	Connection	CMOS1(1-2),CN17(1),CN17(3),CN17(5-6), CN17(7-8),JP2(1-2)		16.184835	6	7958792.615968
1653924110	Connection	CN14		16.184835	1	35685591.360212
1654030006	Connection	CN5		16.184835	1	35685591.360212
1654226307	Connection	CN13		16.184835	1	35685591.360212
1654282209	Connection	PCIE1		16.184835	1	35685591.360212
1654439502	Connection	CN11		16.184835	1	35685591.360212
1654612309	Connection	KM1		16.184835	1	35685591.360212
1654910305	Connection	CN9		16.184835	1	35685591.360212
1654919302	Connection	CN12		16.184835	1	35685591.360212
1655004011	Connection	PWR1,PWR2		16.184835	2	20390152.380746
1655004018	Connection	CPU_FAN1,S YS_FAN1		16.184835	2	20390152.380746
1655305020	Connection	CN6		16.184835	1	35685591.360212
1655404021	Connection	ATX1		16.184835	1	35685591.360212
1750113010	Miscellaneous	BAT1		306.000000	1	1681683.006787
1752002700	Miscellaneous	FS1,FS11,FS2,FS3,FS6,FS7,FS8,FS9		2.400000	8	42678902.518922
1752011000	Miscellaneous	FS10		2.400000	1	254626042.602335
1752300000	Miscellaneous	FS4,FS5		2.400000	2	143944727.196625