

# FWS-7811

## Reliability Prediction Report (MTBF)

Summary	Failure Rate: 10248.858987 ppm MTBF: 97,572 Hours
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Issue date

Approval

Test Engineer

2014/6/27

Tom Lin

Max Chang

# Reliability Prediction (MTBF)

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**I . Model Name:** FWS-7811

**II . Prediction Date:** June, 27, 2014

**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:**

FWS-7811 (9697781102-D):

- Failure Rate: 10248.858987 ppm
- MTBF: 97,572 Hours

**AAEON Reliability Prediction  
Summary**

**File Name:** FWS-7811.rfp  
**Duty Cycle:** 100  
**Calculation Model:** Telcordia Issue 2  
**Method:** Method I Case 3

**Failure Rate:** 10248.858987  
**MTBF (hrs):** 97,572  
**Temperature:** 30  
**Environment:** GF, GU - Ground Fixed, Uncontrolled

Assembly Name	Part Number	Ref Des	Quantity	Failure Rate	MTBF
FWS-7811	9697781102-D		1	10248.858987	97,572

**File Name:** FWS-7811.rfp  
**Assembly:** 9697781102-D  
**Ref Des:**  
**Description:**

**Failure Rate:** 10248.858987  
**MTBF (hrs):** 97,572  
**Temperature:** 30  
**Environment:** GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1050500334	Resistor	R442		2.547039	1	282340674.079668
1050501004	Resistor	R1542,R234, R301, R344,R55,R7 4,R812, R813,R814,R 820		2.547039	10	35079934.879747
1050501054	Resistor	R254,R500		2.547039	2	154078778.388085
1050502204	Resistor	R1230,R144, R266, R270,R276,R 277, R400,R870,R 964, R985		2.547039	10	35079934.879747
1050502224	Resistor	R13,R14,R15 ,R215, R242,R243,R 257, R265,R354,R 397, R436,R65,R8 3,R880, R901,R908,R 912, R913,R926,R 974, R975,R998		2.547039	22	16518584.576317
1050502724	Resistor	R438,R995		2.547039	2	154078778.388085
1050503324	Resistor	R161,R166,R 2,R4, R407,R6,R88 6,R935		2.547039	8	43225424.698300

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1050504724	Resistor	R121,R1259, R1301, R1336,R1372 ,R1408, R141,R142,R 1444, R146,R148,R 1480, R149,R150,R 151, R1516,R153, R154, R155,R1567, R157, R159,R160,R 24,R359, R369,R372,R 545, R575,R832,R 875, R888,R894,R 898, R902,R909,R 933		2.547039	37	9991988.939157
1050505164	Resistor	R416		2.547039	1	282340674.079668
1050506224	Resistor	R10,R12,R8		2.547039	3	107020754.986850
1050507524	Resistor	R235,R261,R 890, R907,R938		2.547039	5	67008142.102588
1050508224	Resistor	R280,R303,R 309, R310,R314,R 324, R330,R331,R 337, R367,R368		2.547039	11	32049696.385471
1050510034	Resistor	R201,R216,R 221, R240,R262,R 441, R856,R88		2.547039	8	43225424.698300
1050511009	Resistor	R183,R785		2.547039	2	154078778.388085
1050519114	Resistor	R35		2.547039	1	282340674.079668
1050521024	Resistor	R22		2.547039	1	282340674.079668
1050524004	Resistor	R66		2.547039	1	282340674.079668
1050524904	Resistor	R113,R114,R 129, R130,R311		2.547039	5	67008142.102588
1050524909	Resistor	R202,R348,R 452		2.547039	3	107020754.986850
1050527424	Resistor	R249,R788		2.547039	2	154078778.388085

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1050530004	Resistor	R147,R156,R158		2.547039	3	107020754.986850
1050532414	Resistor	R798		2.547039	1	282340674.079668
1050533004	Resistor	R757,R759		2.547039	2	154078778.388085
1050536514	Resistor	R817,R818,R819		2.547039	3	107020754.986850
1050538314	Resistor	R48		2.547039	1	282340674.079668
1050544264	Resistor	R179,R46		2.547039	2	154078778.388085
1050547004	Resistor	R252,R279		2.547039	2	154078778.388085
1050549904	Resistor	R784,R965,R987		2.547039	3	107020754.986850
1050551004	Resistor	R1547		2.547039	1	282340674.079668
1050560414	Resistor	R1543		2.547039	1	282340674.079668
1050563420	Resistor	R308		2.547039	1	282340674.079668
1050564904	Resistor	R244		2.547039	1	282340674.079668
1050582504	Resistor	R193		2.547039	1	282340674.079668
1050703334	Resistor	R120,R126,R1281, R1284,R1322, ,R1359, R1394,R1430, ,R1467, R1503,R1539, ,R1592, R1597,R1602, ,R1608, R1611,R1617, ,R1622		2.547039	18	20032117.836120
1050708234	Resistor	R91		2.547039	1	282340674.079668
1053510009	Resistor	R251		2.547039	1	282340674.079668
1059700001	Resistor	R219,R220,R577, R578,R579,R799		2.547039	6	56573956.677649
105A500103	Resistor	R59		2.547039	1	282340674.079668

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105A500139	Resistor	R1228,R1229, R1236, R124,R125,R 132, R133,R136,R 152, R1540,R1541 ,R1546, R195,R218,R 222, R229,R255,R 263, R271,R291,R 296, R300,R329,R 339, R346,R355,R 38,R39, R390,R391,R 395, R401,R415,R 439, R440,R455,R 464, R532,R753,R 754, R838,R858,R 859, R860,R861,R 862, R863,R		2.547039	53	7043131.173162
105A500239	Resistor	R796		2.547039	1	282340674.079668
105A501003	Resistor	R322		2.547039	1	282340674.079668



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105A501039	Resistor	R117,R1261, R1262, R1263,R1264 ,R1265, R1266,R1267 ,R1270, R1272,R1273 ,R1276, R1277,R1279 ,R1280, R1282,R1302 ,R1303, R1304,R1305 ,R1306, R1307,R1308 ,R1311, R1313,R1315 ,R1317, R1318,R1319 ,R1320, R1323,R1338 ,R1339, R1340,R1341 ,R1342, R1343,R1344 ,R1345, R1349,R13		2.547039	262	1464420.698886
105A501053	Resistor	R398		2.547039	1	282340674.079668
105A501139	Resistor	R53		2.547039	1	282340674.079668
105A501323	Resistor	R258		2.547039	1	282340674.079668
105A501529	Resistor	R170		2.547039	1	282340674.079668
105A501539	Resistor	R11,R145,R7 ,R9		2.547039	4	82309758.689546
105A501829	Resistor	R382		2.547039	1	282340674.079668
105A502039	Resistor	R223,R224,R 238, R326,R385,R 450		2.547039	6	56573956.677649
105A502233	Resistor	R501		2.547039	1	282340674.079668
105A503039	Resistor	R925		2.547039	1	282340674.079668
105A503309	Resistor	R236,R245,R 246, R878,R884		2.547039	5	67008142.102588
105A505109	Resistor	R185,R186,R 194, R839		2.547039	4	82309758.689546
105A506829	Resistor	R931		2.547039	1	282340674.079668
105A506834	Resistor	R67		2.547039	1	282340674.079668
105A507503	Resistor	R105,R782		2.547039	2	154078778.388085

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105A510009	Resistor	R104,R107,R17,R19,R21,R58,R73,R837,R84,R844		2.547039	10	35079934.879747
105A510053	Resistor	R381		2.547039	1	282340674.079668
105A511313	Resistor	R305		2.547039	1	282340674.079668
105A511333	Resistor	R40		2.547039	1	282340674.079668
105A515009	Resistor	R181,R267,R268,R269,R302,R306,R349,R715,R716,R717,R718,R745,R746,R747,R748,R755,R756,R815,R822,R823		2.547039	20	18104712.511396
105A515413	Resistor	R315		2.547039	1	282340674.079668
105A522663	Resistor	R284		2.547039	1	282340674.079668
105A526114	Resistor	R51		2.547039	1	282340674.079668
105A530109	Resistor	R797		2.547039	1	282340674.079668
105A532429	Resistor	R213		2.547039	1	282340674.079668
105A536529	Resistor	R200,R795		2.547039	2	154078778.388085
105A537403	Resistor	R821		2.547039	1	282340674.079668
105A549919	Resistor	R1278,R1321,R1354,R1393,R1427,R1464,R1500,R1535		2.547039	8	43225424.698300
105A549969	Resistor	R109,R110,R211,R451		2.547039	4	82309758.689546
105A553629	Resistor	R64		2.547039	1	282340674.079668
105A580623	Resistor	R776		2.547039	1	282340674.079668
105A590923	Resistor	R777		2.547039	1	282340674.079668

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105A700003	Resistor	R103,R1232, R1233, R1234,R1235 ,R1257, R1258,R1298 ,R1299, R1334,R1335 ,R1370, R1371,R1406 ,R1407, R1442,R1443 ,R1478, R1479,R1514 ,R1515, R28,R33,R34 ,R36, R37,R47,R50 ,R52, R57,R778,R8 24		2.547039	32	11502702.879433
105A700009	Capacitor	C487,C488,C 489, C490,C491,C 492, C493,C494,C 495, C496,C497,C 500, C503,C505,C 510, C513,C594,C 595, C598,C599,C 610, C629,C645,C 647, C677,C684,C 712, C733,C743,C 745, C747,C752,R 102, R106,R112,R 1136, R1137,R1138 ,R1171, R1188,R1189 ,R1190, R1191,R1192 ,R1193, R1194		1.128806	259	3368130.922616

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105A70000A	Capacitor	R1248,R1289 ,R1328, R1361,R1400 ,R1436, R1472,R1505		1.128806	8	101746760.035398
105A700203	Capacitor	R298,R317		1.128806	2	375289731.076049
105A702263	Capacitor	R23,R49,R56 ,R76, R77,R78		1.128806	6	133979725.056342
105A703309	Capacitor	R1252,R1253 ,R1254, R1256,R1292 ,R1293, R1294,R1297 ,R1325, R1326,R1327 ,R1333, R1365,R1366 ,R1368, R1369,R137, R138, R139,R1397, R1398, R1399,R1405 ,R1433, R1434,R1435 ,R1441, R1469,R1470 ,R1471, R1477,R1509 ,R1510, R1511,R1512		1.128806	35	24285352.591796

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105A703329	Capacitor	R1269,R1274 ,R1275, R1283,R1285 ,R1286, R1310,R1314 ,R1316, R1346,R1350 ,R1351, R1383,R1385 ,R1388, R1419,R1420 ,R1423, R1454,R1458 ,R1460, R1491,R1494 ,R1496, R1526,R1530 ,R1532, R1591,R1593 ,R1594, R1596,R1598 ,R1599, R1601,R1603 ,R1604, R1606,R1607 ,R1609, R1612,R1		1.128806	48	17813540.224875
105A705129	Capacitor	R25,R26,R27 ,R29, R30,R31		1.128806	6	133979725.056342
105A705609	Capacitor	R184,R783		1.128806	2	375289731.076049
105A710009	Capacitor	R829		1.128806	1	704977644.692287
105A710039	Capacitor	R89		1.128806	1	704977644.692287
105A739039	Capacitor	R360,R377		1.128806	2	375289731.076049
106B747030	Capacitor	RT2		1.128806	1	704977644.692287
106BA01033	Capacitor	R140,R903,R T1		1.128806	3	257514172.353070
1121415090	Capacitor	C525		1.128806	1	704977644.692287
1121533480	Capacitor	C458,C459		1.128806	2	375289731.076049
1124410191	Capacitor	C451		1.128806	1	704977644.692287
1124418090	Capacitor	C281,C282		1.128806	2	375289731.076049

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1124418190	Capacitor	C28,C29,C30 ,C31, C356,C361,C 362, C363,C365,C 366, C367,C368,C 465, C466,C467,C 468, C469,C470,C 471, C472		1.128806	20	41950408.034165
1124427090	Capacitor	C207,C208		1.128806	2	375289731.076049
1124427091	Capacitor	C888,C889,C 897, C898,C906,C 907, C915,C916,C 924, C925,C933,C 934, C942,C943,C 951, C952		1.128806	16	52112480.802928
1124468090	Capacitor	C224,C262,C 960		1.128806	3	257514172.353070
1124533191	Capacitor	C447,C457,C 62,C63		1.128806	4	196873384.410843
1124533280	Capacitor	C10,C11,C12		1.128806	3	257514172.353070
1124547190	Capacitor	C383,C384,C 385, C386,C387,C 388, C389,C390,C 391, C392,C393,C 394, C421,C423,C 425, C427		1.128806	16	52112480.802928
1129522790	Capacitor	C754,C755,C 773, C826		1.128806	4	196873384.410843
1129610260	Capacitor	C343,C345,C 346, C347		1.128806	4	196873384.410843
1129710091	Capacitor	C43,C454,C4 56,C460, C52,C66		1.128806	6	133979725.056342
1129710391	Capacitor	C42,C438,C9 65		1.128806	3	257514172.353070
1129722091	Capacitor	C45,C58,C71		1.128806	3	257514172.353070
1174518180	Capacitor	CP1,CP2,CP3 ,CP4		1.128806	4	196873384.410843

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1181627194	Capacitor	C27,C3,C4,C46,C5, C6		1.128806	6	133979725.056342
1189656196	Capacitor	C123,C124,C125, C142,C143,C163, C176,C177,C193, C265,C268,C275, C409,C72,C73,C77, C78,C80,C81,C84, C867		1.128806	21	40003791.624280
1189682199	Capacitor	C104,C105,C146,C15, C179,C220,C221		1.128806	7	115633865.771428
11C1510390	Capacitor	C184,C187,C190, C191,C215,C253, C314,C315,C316, C317,C322,C323, C324,C325,C335, C336,C337,C338, C339,C340,C341, C342,C39,C428,C429, C430,C431,C695, C696,C697,C698, C699,C700,C701, C702,C703,C704, C705,C706,C707, C708,C709,C710, C955,C956,C957, C958		1.128806	47	18185851.719462
11C1522390	Capacitor	C144,C145,C243, C250		1.128806	4	196873384.410843

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11C1539840	Capacitor	C887,C896,C905,C914,C923,C932,C941,C950		1.128806	8	101746760.035398
11C2410390	Capacitor	C280		1.128806	1	704977644.692287
11C2501790	Capacitor	C964		1.128806	1	704977644.692287
11C4512290	Capacitor	C38		1.128806	1	704977644.692287
11C4522290	Capacitor	C174,C34,C35,C36		1.128806	4	196873384.410843
11E1510050	Capacitor	C1,C100,C101,C13,C20,C200,C202,C21,C212,C218,C22,C23,C260,C264,C266,C273,C284,C285,C399,C440,C441,C462,C463,C481,C509,C511,C555,C562,C566		1.128806	29	29193260.380640
11E1522680	Capacitor	C228,C461,C642,C966,C972,C973		1.128806	6	133979725.056342
11E1547650	Capacitor	C14,C25,C26,C446		1.128806	4	196873384.410843



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11E2501690	Capacitor	BC10,BC100, BC101, BC102,BC10 3,BC104, BC105,BC10 6,BC107, BC108,BC10 9,BC11, BC110,BC12, BC13, BC14,BC15,B C16, BC17,BC18,B C19, BC20,BC21,B C22, BC23,BC24,B C25, BC26,BC27,B C28, BC29,BC30,B C31, BC32,BC33,B C34, BC35,BC36,B C37, BC38,BC39,B C40, BC41,BC42,B C43, BC44		1.128806	304	2872940.412895
11E4433090	Capacitor	C32		1.128806	1	704977644.692287
11E9501090	Capacitor	C884,C891,C 899, C909,C917,C 926, C935,C945		1.128806	8	101746760.035398

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Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
11E9501091	Capacitor	C106,C111,C112,C114,C122,C126,C141,C211,C214,C226,C24,C251,C267,C276,C279,C292,C295,C296,C298,C370,C416,C417,C418,C419,C452,C483,C506,C507,C508,C519,C520,C521,C523,C527,C537,C539,C541,C544,C549,C552,C554,C556,C558,C560,C561,C563,C565,C568,C297,C974		1.128806	54	15865848.114680
11E9510050	Capacitor	C297,C974		1.128806	2	375289731.076049
11E9522490	Capacitor	C437,C442,C450,C48,C49,C50,C54		1.128806	7	115633865.771428
11E9547680	Capacitor	C219,C229,C434,C435,C455,C55,C56,C83		1.128806	8	101746760.035398

**Reliability Prediction  
Summary**

**File Name:** FWS-7811.rfp  
**Assembly:** 9697781102-D  
**Ref Des:**  
**Description:**

**Failure Rate:** 10248.858987  
**MTBF (hrs):** 97,572  
**Temperature:** 30  
**Environment:** GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
11E9610080	Capacitor	C86,C879,C880,C881,C882,C883,C885,C886,C890,C892,C893,C894,C895,C900,C901,C902,C903,C904,C908,C910,C911,C912,C913,C918,C919,C92,C920,C921,C922,C927,C928,C929,C930,C931,C936,C937,C938,C939,C940,C944,C946,C947,C948,C949		1.128806	44	19402916.060511

**Reliability Prediction  
Summary**

**File Name:** FWS-7811.rfp  
**Assembly:** 9697781102-D  
**Ref Des:**  
**Description:**

**Failure Rate:** 10248.858987  
**MTBF (hrs):** 97,572  
**Temperature:** 30  
**Environment:** GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
11E9622050	Capacitor	C115,C116,C117, C118,C119,C120, C135,C136,C137, C138,C139,C140, C147,C148,C149, C150,C151,C152, C159,C160,C161, C167,C168,C169, C170,C171,C172, C180,C181,C182, C183,C222,C223, C230,C233,C245, C246,C256,C512, C961,C962		1.128806	41	20795506.904934
121110100F	Inductor	L13		4.944252	1	154760964.143460
1211103372	Inductor	L3,L4		4.944252	2	83201062.149749
1211103372	Inductor	L5	31.1	8.438640	1	90675417.100605
1211103671	Inductor	L1,L12		4.944252	2	83201062.149749
1212306030	Inductor	FB2,FB21,FB22,FB23, FB24		4.944252	5	35631881.582999
121230603I	Inductor	FB25,FB26		4.944252	2	83201062.149749
12123B000L	Inductor	FB1		4.944252	1	154760964.143460
12123C000C	Inductor	L10,L11,L6,L7,L8, L9		4.944252	6	30055900.223009
12123C0010	Inductor	FB3,FB6,FB7		4.944252	3	57363284.375370
1214309006	Inductor	L14,L15,L28, L29		4.944252	4	43912872.424775
121430900A	Inductor	L16,L17,L18, L19, L30,L31,L32, L33		4.944252	8	22874049.098230
123132505D	Miscellaneous	Y1		19.200000	1	23844262.770939
123132505G	Miscellaneous	Y10,Y3,Y4,Y5, Y6,Y7, Y8,Y9		19.200000	8	2473720.227203
1231332721	Miscellaneous	Y2		19.200000	1	23844262.770939
1233320050	Miscellaneous	Y11		19.200000	1	23844262.770939

**File Name:** FWS-7811.rfp  
**Assembly:** 9697781102-D  
**Ref Des:**  
**Description:**

**Failure Rate:** 10248.858987  
**MTBF (hrs):** 97,572  
**Temperature:** 30  
**Environment:** GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
12G15705007X	Connection	SATA2,SATA5		16.184835	2	20390152.380746
1300414848	Semiconductor	D3		7.793411	1	92807310.010983
1300581940	Semiconductor	D25		7.793411	1	92807310.010983
1301005450	Semiconductor	Q81		7.793411	1	92807310.010983
1301053040	Semiconductor	D7,D8,D9		7.793411	3	35106858.962001
1301400642	Semiconductor	D10,D4		7.793411	2	50578095.223398
1304400500	Optical Device	LED1		79.003355	1	6497172.749112
1305040241	Semiconductor	D15,D16,D17,D18,D19,D20,D21,D22,D31,D32,D33,D34,D35,D36,D37,D38		7.793411	16	7341618.295818
1305099140	Semiconductor	D1,D2,D23,D24,D26,D5,D6		7.793411	7	16052497.121446
1305100541	Semiconductor	D11,D12,D13,D14,D27,D28,D29,D30		7.793411	8	14161142.003130
1310222211	Semiconductor	Q27,Q83		22.463360	2	17315095.066101
1310390413	Semiconductor	Q109,Q30,Q31,Q32,Q33,Q34,Q35,Q40,Q46,Q47,Q48,Q61		22.463360	12	3332353.664911
1311390612	Semiconductor	Q56		22.463360	1	31642600.748419
1314043113	Semiconductor	VR1	24.4	42.082480	1	16890618.698672
1314108412	Semiconductor	U15		22.463360	1	31642600.748419
1314895510	Semiconductor	U6	27.1	44.853090	1	15847272.155595
1315034430	Integrated Circuit	Q29,Q43,Q44,Q45		43.803003	4	3879156.910661
1314895510	Semiconductor	U14,U60		22.463360	2	17315095.066101
1315190100	Integrated Circuit	U26,U36		43.803003	2	6834791.244197
1315200312	Integrated Circuit	Q55		43.803003	1	11739202.588727
1315230114	Integrated Circuit	Q60		43.803003	1	11739202.588727
1315503010	Integrated Circuit	Q10,Q14,Q16,Q18,Q21,Q23,Q8,Q9		43.803003	8	2144463.783749

**File Name:** FWS-7811.rfp  
**Assembly:** 9697781102-D  
**Ref Des:**  
**Description:**

**Failure Rate:** 10248.858987  
**MTBF (hrs):** 97,572  
**Temperature:** 30  
**Environment:** GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1315700211	Integrated Circuit	Q1,Q108,Q19,Q2,Q20,Q3,Q36,Q37,Q38,Q4,Q42,Q49,Q5,Q50,Q51,Q53,Q54,Q58,Q59,Q6,Q77		43.803003	21	904340.586921
1315700212	Integrated Circuit	Q82		43.803003	1	11739202.588727
1315703011	Integrated Circuit	Q15	32.3	345.542730	1	1488129.497217
1315703011	Integrated Circuit	Q13,Q17,Q22,Q28		43.803003	4	3879156.910661
1430958200	Integrated Circuit	U1	26.8	250.134739	1	2055741.360356
1315703011	Integrated Circuit	Q41	29.5	293.523103	1	1751863.222388
14400C2260	Integrated Circuit	U11	26.7	248.644732	1	2068060.422818
1440211AT0	Integrated Circuit	U50,U52,U53,U54,U55,U56,U57,U58		43.803003	8	2144463.783749
1440211AT0	Integrated Circuit	U50	25	224.505221	1	2290424.812863
1469128350	Integrated Circuit	U17		43.803003	1	11739202.588727
1482640HC0	Integrated Circuit	U49		43.803003	1	11739202.588727
1498052B100	Integrated Circuit	U59		43.803003	1	11739202.588727
14S1035801	Integrated Circuit	U12		43.803003	1	11739202.588727
14S2750100	Integrated Circuit	U13		43.803003	1	11739202.588727
14S3003700	Integrated Circuit	TF1,TF2,TF3,TF4		43.803003	4	3879156.910661
14S3121600	Integrated Circuit	U2		43.803003	1	11739202.588727
14S4081102	Integrated Circuit	U5,U8		43.803003	2	6834791.244197
14S4519500	Integrated Circuit	U16		43.803003	1	11739202.588727
14S4872800	Integrated Circuit	U38		43.803003	1	11739202.588727
14S5912300	Integrated Circuit	U7		43.803003	1	11739202.588727
14S5A00821	Integrated Circuit	U68		43.803003	1	11739202.588727
14S5A01430	Integrated Circuit	U20		43.803003	1	11739202.588727
14S5A23200	Integrated Circuit	U35		43.803003	1	11739202.588727
14S5A23200	Integrated Circuit	U27	27.8	265.482089	1	1936900.266906
14S9080900	Integrated Circuit	U9		43.803003	1	11739202.588727
1540775082	Resistor	RP3,RP4,RP5,RP6		9.971436	4	17049357.262242
1540782080	Resistor	RP1		9.971436	1	51606907.671214
1540782280	Resistor	RP2		9.971436	1	51606907.671214
1601110201	Switching Device	SW1		23.541578	1	23887758.027611
16515C049A	Connection	DIMM1,DIMM3		16.184835	2	20390152.380746
16515C049B	Connection	DIMM2,DIMM4		16.184835	2	20390152.380746
1651611500	Connection	U3		16.184835	1	35685591.360212

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**Ref Des:**  
**Description:**

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**MTBF (hrs):** 97,572  
**Temperature:** 30  
**Environment:** GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
165251220A	Connection	LAN1,LAN2,L AN3, LAN4		16.184835	4	11344857.509064
165251420B	Connection	LAN5,LAN6,L AN7, LAN8		16.184835	4	11344857.509064
1652826200	Connection	COM1/USB1		16.184835	1	35685591.360212
1653002100	Connection	CN4		16.184835	1	35685591.360212
1653003100	Connection	COMS1		16.184835	1	35685591.360212
1653003101	Connection	CN10,JP2		16.184835	2	20390152.380746
1653004200	Connection	FP1,FP2		16.184835	2	20390152.380746
165300420F	Connection	KB/MS1		16.184835	1	35685591.360212
165300420L	Connection	CN16		16.184835	1	35685591.360212
165320820B	Connection	VGA1		16.184835	1	35685591.360212
1653212100	Connection	LPC1		16.184835	1	35685591.360212
1653212203	Connection	LCM1		16.184835	1	35685591.360212
1653300100	Connection	FP1(5-7)		16.184835	1	35685591.360212
1653300101	Connection	COMS1(1-2) 1		16.184835	1	35685591.360212
1653300102	Connection	JP2(1-2)		16.184835	1	35685591.360212
1653300107	Connection	CN10_2-3		16.184835	1	35685591.360212
165392521H	Connection	CN9999		16.184835	1	35685591.360212
1655004011	Connection	CN13,CN15		16.184835	2	20390152.380746
1655004018	Connection	CPU_FAN11, SYS_FAN11, SYS_FAN22		16.184835	3	14515880.849373
1655408023	Connection	ATX2		16.184835	1	35685591.360212
1655424022	Connection	ATX1		16.184835	1	35685591.360212
175011901H	Connection	BT1A		16.184835	1	35685591.360212
1750220326	Connection	BT1		16.184835	1	35685591.360212
1752002700	Connection	FS1,FS2		16.184835	2	20390152.380746
1759100007		BZ1		0.000000	1	0.000000