

FWS-7820

Reliability Prediction Report (MTBF)

Summary	Failure Rate: 13917.487624 MTBF: 71,852 Hours
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Issue date

QE Manager

Test Engineer

2016-09-21

KJ Wang

Louie Lee

Reliability Prediction (MTBF)

I . Model Name: FWS-7820

II . Prediction Date: September. 9th, 2016

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

IV . Predicted by: Louie Lee

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-7820 (M/B: 969782002-D ;

PER-T393: 9697T39302-D ;

PER-R38x: 9697R38X02-D):

- Failure Rate: 13917.487624

- MTBF: 71,852 Hours

**AAEON Reliability Prediction
Summary**

File Name: FWS-7820.rfp
Duty Cycle: 100
Calculation Model: Telcordia Issue 2
Method: Method I Case 3

Failure Rate: 13917.487624
MTBF (hrs): 71,852
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Assembly Name	Part Number	Ref Des	Quantity	Failure Rate	MTBF
FWS-7820			1	13917.487624	71,852
FWB-7820	9697782002-D		1	9918.731678	100,819
PER-T393	9697T39302-D		1	3291.598381	303,804
PER-R38x	9697R38X02-D		1	1066.750652	937,426

File Name: FWS-7820.rfp
Assembly: 9697782002-D
Ref Des:
Description:

Failure Rate: 9918.731678
MTBF (hrs): 100,819
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1050501054	Resistor	R1206,R1232, R1286, R252,R267,R 272, R384,R738,R 799		2.547039	9	38754445.632391
1050501224	Resistor	R1065		2.547039	1	282340674.079668
1050501234	Resistor	R27,R812		2.547039	2	154078778.388085
1050501334	Resistor	R399		2.547039	1	282340674.079668
1050502004	Resistor	R689,R708,R 780		2.547039	3	107020754.986850
1050502204	Resistor	R109		2.547039	1	282340674.079668
1050502224	Resistor	R111,R172,R 217, R218,R220,R 260, R265,R456,R 461, R462,R463,R 608, R847,R855		2.547039	14	25477245.255648
1050502234	Resistor	R11,R41		2.547039	2	154078778.388085
1050502724	Resistor	R1312,R854		2.547039	2	154078778.388085
1050503324	Resistor	R131,R204,R 657, R662,R92		2.547039	5	67008142.102588
1050503624	Resistor	R1167,R4		2.547039	2	154078778.388085
1050504324	Resistor	R752		2.547039	1	282340674.079668
1050504334	Resistor	R77		2.547039	1	282340674.079668
1050504724	Resistor	R14,R140,R1 81,R206, R508,R515,R 519, R539,R546,R 551, R556,R563,R 570, R576,R583,R 588, R593,R597,R 616, R620,R650,R 696, R702,R703,R 718, R720,R760,R 766, R771,R807,R 822		2.547039	31	11861900.957214
1050505134	Resistor	R1231,R1291 ,R367, R753		2.547039	4	82309758.689546

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1050505134-00	Resistor	R773		2.547039	1	282340674.079668
1050505164	Resistor	R429		2.547039	1	282340674.079668
1050505604	Resistor	R48		2.547039	1	282340674.079668
1050505624-00	Resistor	R710		2.547039	1	282340674.079668
1050506224	Resistor	R104,R143,R209		2.547039	3	107020754.986850
1050507524	Resistor	R645,R8		2.547039	2	154078778.388085
1050507530	Resistor	R301,R772		2.547039	2	154078778.388085
1050509124	Resistor	R9		2.547039	1	282340674.079668
1050510034	Resistor	R1323,R1376,R1396,R147,R1509,R253,R329,R332,R333,R445,R70		2.547039	11	32049696.385471
1050510524	Resistor	R1230,R30,R751		2.547039	3	107020754.986850
1050511009	Resistor	R49		2.547039	1	282340674.079668
1050511304	Resistor	R1350		2.547039	1	282340674.079668
1050512004	Resistor	R45		2.547039	1	282340674.079668
1050512724	Resistor	R827		2.547039	1	282340674.079668
1050513714	Resistor	R7		2.547039	1	282340674.079668
1050520004	Resistor	R3		2.547039	1	282340674.079668
1050521514	Resistor	R6		2.547039	1	282340674.079668
1050522614	Resistor	R1290		2.547039	1	282340674.079668
1050524004	Resistor	R564,R565,R571,R578		2.547039	4	82309758.689546
1050524904	Resistor	R163,R164,R656,R661		2.547039	4	82309758.689546
1050524909	Resistor	R439,R510,R526		2.547039	3	107020754.986850
1050524924	Resistor	R824		2.547039	1	282340674.079668
1050528714	Resistor	R778		2.547039	1	282340674.079668
1050530004	Resistor	R108,R208,R215		2.547039	3	107020754.986850
1050530164	Resistor	R1097		2.547039	1	282340674.079668
1050530914	Resistor	R369		2.547039	1	282340674.079668
1050533034	Resistor	R1177,R282,R794		2.547039	3	107020754.986850
1050536514	Resistor	R1229		2.547039	1	282340674.079668
1050539004	Resistor	R885,R886,R889		2.547039	3	107020754.986850
1050540214	Resistor	R46		2.547039	1	282340674.079668
1050540224	Resistor	R1511		2.547039	1	282340674.079668
1050542214	Resistor	R1145		2.547039	1	282340674.079668
1050545364	Resistor	R47		2.547039	1	282340674.079668

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1050547004	Resistor	R1082,R1085 ,R1205, R28,R840		2.547039	5	67008142.102588
1050547034	Resistor	R145		2.547039	1	282340674.079668
1050549904	Resistor	R935,R948		2.547039	2	154078778.388085
1050549924	Resistor	R1017,R1018 ,R1019, R978		2.547039	4	82309758.689546
1050549964	Resistor	R651		2.547039	1	282340674.079668
1050551034	Resistor	R146		2.547039	1	282340674.079668
1050560414	Resistor	R777		2.547039	1	282340674.079668
1050562004	Resistor	R40		2.547039	1	282340674.079668
1050564904	Resistor	R25		2.547039	1	282340674.079668
1050568004	Resistor	R20		2.547039	1	282340674.079668
1050568114	Resistor	R2		2.547039	1	282340674.079668
1050584514	Resistor	R137,R160		2.547039	2	154078778.388085
1050584524	Resistor	R16		2.547039	1	282340674.079668
1050590914	Resistor	R24		2.547039	1	282340674.079668
1050700334	Resistor	R1253,R1254 ,R1255, R1260,R632, R903, R904,R905,R 906, R907		2.547039	10	35079934.879747
1050703334	Resistor	R349,R350		2.547039	2	154078778.388085
1050756004	Resistor	R1172,R1340		2.547039	2	154078778.388085
1053510009	Resistor	R1130	36	4.687086	1	153428509.281719
1054700289	Resistor	R315		2.547039	1	282340674.079668
1059700001	Resistor	R1252,R69,R 821, R870,R967		2.547039	5	67008142.102588
1059700101	Resistor	R254,R263,R 268, R269,R270,R 271,R36		2.547039	7	48991237.965885

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105A500139	Resistor	R1011,R1021 ,R1022, R1091,R1110 ,R1319, R139,R231,R 234, R250,R278,R 297, R298,R326,R 466, R492,R498,R 502, R574,R582,R 587, R592,R602,R 613, R791,R795,R 848, R958		2.547039	28	13089488.559853
105A501039	Resistor	R10,R1046,R 1048, R1050,R1052 ,R1111, R1133,R1134 ,R1215, R1228,R1240 ,R1245, R1270,R1271 ,R1462, R184,R207,R 23,R251, R257,R308,R 352, R400,R431,R 443, R458,R459,R 603, R606,R61,R6 10,R614, R615,R64,R6 42,R647, R648,R649,R 677, R740,R754,R 762, R768,R792,R 796, R825,R		2.547039	49	7603103.900483
105A501053	Resistor	R275		2.547039	1	282340674.079668
105A501139	Resistor	R1289,R1510 ,R368		2.547039	3	107020754.986850
105A5013231315 070020	Resistor	R1100		2.547039	1	282340674.079668
105A501529	Resistor	R668		2.547039	1	282340674.079668

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105A501539	Resistor	R130,R203,R643,R91		2.547039	4	82309758.689546
105A501829	Resistor	R299,R300,R33		2.547039	3	107020754.986850
105A502039	Resistor	R1310,R1320		2.547039	2	154078778.388085
105A502263	Resistor	R212,R223,R237,R240,R243,R246,R71		2.547039	7	48991237.965885
105A503039	Resistor	R1207,R644,R646		2.547039	3	107020754.986850
105A503309	Resistor	R1034,R1329,R1370,R256,R281,R284,R489,R495,R500,R637,R638		2.547039	11	32049696.385471
105A503323	Resistor	R43		2.547039	1	282340674.079668
105A505109	Resistor	R1330,R1331,R1371,R1372,R674,R678,R679,R681,R682		2.547039	9	38754445.632391
105A505163	Resistor	R102,R132,R148,R173,R185,R189,R193		2.547039	7	48991237.965885
105A505923	Resistor	R15		2.547039	1	282340674.079668
105A506233	Resistor	R26		2.547039	1	282340674.079668
105A506829	Resistor	R310,R311,R44		2.547039	3	107020754.986850
105A507503	Resistor	R229,R261,R276		2.547039	3	107020754.986850
105A507509	Resistor	R327		2.547039	1	282340674.079668
105A508233	Resistor	R1219,R307		2.547039	2	154078778.388085
105A510009	Resistor	R1209,R121,R177,R224,R317,R321,R328,R63,R67,R72,R75		2.547039	11	32049696.385471
105A514313	Resistor	R18		2.547039	1	282340674.079668
105A515009	Resistor	R1241,R1242,R225,R226,R258,R259,R273,R274		2.547039	8	43225424.698300
105A523213	Resistor	R21		2.547039	1	282340674.079668

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105A530109	Resistor	R42		2.547039	1	282340674.079668
105A543203	Resistor	R5		2.547039	1	282340674.079668
105A543233	Resistor	R138,R159		2.547039	2	154078778.388085
105A556229	Resistor	R22		2.547039	1	282340674.079668
105A556269	Resistor	R324		2.547039	1	282340674.079668
105A561913	Resistor	R448		2.547039	1	282340674.079668
105A562034	Resistor	R444		2.547039	1	282340674.079668
105A575009	Resistor	R469		2.547039	1	282340674.079668
105A586623	Resistor	R19		2.547039	1	282340674.079668
105A591003	Resistor	R107,R112,R117, R119,R126,R96,R98		2.547039	7	48991237.965885
105A700003	Resistor	R101,R1044, R1068, R1071,R1084, ,R1090, R1101,R1147, ,R1160, R1165,R1176, ,R1179, R1218,R1284, ,R1326, R1345,R1349, ,R135, R151,R176,R188, R192,R196,R210, R211,R221,R222, R235,R236,R238, R239,R241,R242, R244,R245,R35, R351, R355,R37,R385, R389, R416,R417,R420, R423,R4		2.547039	59	6343183.296372

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105A700009	Resistor	R1001,R1004 ,R1023, R1030,R1036 ,R1039, R1051,R1054 ,R1056, R1057,R1058 ,R1060, R1062,R1063 ,R1064, R1070,R1073 ,R1076, R1079,R1083 ,R1086, R1089,R1102 ,R1108, R1109,R1117 ,R1119, R1126,R1127 ,R1128, R1132,R1141 ,R1143, R1148,R1151 ,R1153, R1155,R1162 ,R1163, R1164,R1		2.547039	274	1400991.446450
105A70000A	Resistor	R1005,R1006 ,R283, R693,R695,R 820, R830,R834,R 836, R842,R849,R 851, R866		2.547039	13	27342571.921361
105A700103	Resistor	R440,R701		2.547039	2	154078778.388085
105A700109	Resistor	R39		2.547039	1	282340674.079668
105A700139	Resistor	R1191,R1225 ,R1307, R1309,R1321 ,R1366, R1367,R1368 ,R382, R484,R485,R 487, R488,R522,R 523, R533,R561,R 567, R712,R833,R 839		2.547039	21	17274945.076062
105A701009	Resistor	R53		2.547039	1	282340674.079668

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105A701039	Resistor	R1012,R1020 ,R1025, R1026,R1027 ,R1136, R1137,R1138 ,R1140, R1149,R1157 ,R1187, R1188,R1192 ,R1194, R1195,R1202 ,R1235, R1261,R1262 ,R1266, R1267,R1269 ,R1274, R1276,R1277 ,R1278, R1279,R1300 ,R1378, R1435,R1436 ,R1437, R1438,R1439 ,R1440, R1441,R1442 ,R1443, R1444,R1		2.547039	82	4596628.018709
105A701059	Resistor	R1250,R372		2.547039	2	154078778.388085
105A701069	Resistor	R1304		2.547039	1	282340674.079668
105A701529	Resistor	R922		2.547039	1	282340674.079668
105A701539	Resistor	R676,R975		2.547039	2	154078778.388085
105A702039	Resistor	R1028,R1354 ,R1355, R743		2.547039	4	82309758.689546
105A702209	Resistor	R723,R724,R 727, R728,R731,R 732, R735,R736,R 741, R745,R746,R 755, R758,R763,R 819, R826,R829,R 831, R832,R837,R 844, R845,R853,R 856		2.547039	24	15190138.820515

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105A702229	Resistor	R1010,R1093 ,R1112, R1322,R1328 ,R1359, R1360,R1361 ,R1377, R1477,R1478		2.547039	11	32049696.385471
105A702239	Resistor	R1,R1488,R3 75,R380, R486		2.547039	5	67008142.102588
105A702269	Resistor	R144,R1508, R156, R50		2.547039	4	82309758.689546
105A702433	Resistor	R1217,R306, R790, R90		2.547039	4	82309758.689546
105A702729	Resistor	R800		2.547039	1	282340674.079668
105A703003	Resistor	R1351,R1352		2.547039	2	154078778.388085
105A703309	Resistor	R802		2.547039	1	282340674.079668
105A703329	Resistor	R1159,R1182 ,R1185, R1259,R1263 ,R1272, R909,R911,R 912, R918,R920,R 925, R927		2.547039	13	27342571.921361
105A704729	Resistor	R1078,R1237 ,R482, R483,R529,R 530, R934,R997		2.547039	8	43225424.698300
105A704739	Resistor	R402,R435,R 449, R737		2.547039	4	82309758.689546
105A705129	Resistor	R103,R114,R 157, R197,R213,R 233		2.547039	6	56573956.677649
105A708209	Resistor	R769,R808,R 823		2.547039	3	107020754.986850
105A708229	Resistor	R1135,R479, R976		2.547039	3	107020754.986850
105A710009	Resistor	R319,R356,R 504		2.547039	3	107020754.986850
105A710039	Resistor	R1041,R1166 ,R1327, R312,R373,R 388, R436,R468,R 496, R803,R872,R 941		2.547039	12	29507083.749401
105A722009	Resistor	R323		2.547039	1	282340674.079668

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105A743003	Resistor	R31		2.547039	1	282340674.079668
105A747009	Resistor	R852,R859,R867, R868,R878,R879, R881,R887,R899		2.547039	9	38754445.632391
105A756039	Resistor	R142		2.547039	1	282340674.079668
105A768009	Resistor	R100,R105,R110, R115,R118,R124,R94		2.547039	7	48991237.965885
106B510034	Resistor	RT1,RT2,RT3,RT4		7.724580	4	21923287.146155
106BA01033	Resistor	R1105,R506		7.724580	2	38596617.434771
1112610102	Capacitor	C429,C430,C476, C519,C730,C731, C732,C733,C735, C736,C737,C738, C739,C740		4.744484	14	13902256.772671
1112633190	Capacitor	C71,C72,C73,C74		4.744484	4	45505862.704531
1121415090	Capacitor	C296		1.128806	1	704977644.692287
1121501690	Capacitor	BC1,BC2,BC3,BC4, C253,C346,C453, C467,C468,C475, C487,C490,C491, C502,C503,C518, C527,C532,C534, C540,C542,C543, C545,C548,C637, C680,C687,C727, C858,C859,C860		1.128806	31	27349602.091781

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1121501691	Capacitor	C333,C381,C431, C537,C580,C596, C623,C655,C692, C703,C721		1.128806	11	74892583.279796
1121647480	Capacitor	C6		1.128806	1	704977644.692287
1122722080	Capacitor	C493,C494		1.128806	2	375289731.076049
1124418090	Capacitor	C716,C719		1.128806	2	375289731.076049
1124418190	Capacitor	C10,C207,C209,C210, C211,C212,C213, C214,C215,C221, C222,C223,C224, C225,C226,C227, C228,C4,C8,C9		1.128806	20	41950408.034165
1124433090	Capacitor	C291		1.128806	1	704977644.692287
1124468090	Capacitor	C13,C16		1.128806	2	375289731.076049
1124510280	Capacitor	C290		1.128806	1	704977644.692287
1124522280	Capacitor	C129,C137,C149, C150,C151,C152,C5		1.128806	7	115633865.771428
1124522680	Capacitor	C47,C64		1.128806	2	375289731.076049
1124533280	Capacitor	C21,C37,C80		1.128806	3	257514172.353070
1129610051	Capacitor	C145,C154,C251, C254,C260,C262, C263,C264,C874		1.128806	9	90863428.080946
1129610080	Capacitor	C119,C120,C139, C158,C169,C182, C184,C185,C456, C480,C552		1.128806	11	74892583.279796

File Name: FWS-7820.rfp
Assembly: 9697782002-D
Ref Des:
Description:

Failure Rate: 9918.731678
MTBF (hrs): 100,819
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1129701690	Capacitor	C105,C124,C165, C172,C486,C492, C528,C567,C570, C578,C618,C619, C671,C677		1.128806	14	59316298.011235
1129701790	Capacitor	C488,C489		1.128806	2	375289731.076049
1129701791	Capacitor	C572,C573,C574, C575,C576,C605, C606,C607,C608, C609,C627,C628, C629,C641,C649, C650,C651,C652		1.128806	18	46478509.590073
1129710091	Capacitor	C132,C133,C160, C167,C94,C99		1.128806	6	133979725.056342
1129722091	Capacitor	C108,C140,C170, C482,C681		1.128806	5	159367490.199266
1174518180	Capacitor	CP1,CP2,CP3,CP4		1.128806	4	196873384.410843
1181627194	Capacitor	C78,C873		4.744484	2	86049450.747498
1189610153	Capacitor	C704,C705		4.744484	2	86049450.747498
1189615154	Capacitor	C427,C584		4.744484	2	86049450.747498
1189656196	Capacitor	C198,C199,C201, C202,C203,C204, C205,C237,C238, C239,C241,C311, C335,C361,C403, C421,C435,C598, C603,C70,C75,C872		4.744484	22	8986075.849542
1189656198	Capacitor	C159,C161		4.744484	2	86049450.747498
1189682199	Capacitor	C243		4.744484	1	159663026.715137
11A4416080	Capacitor	C138,C174		1.128806	2	375289731.076049

File Name: FWS-7820.rfp
Assembly: 9697782002-D
Ref Des:
Description:

Failure Rate: 9918.731678
MTBF (hrs): 100,819
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
11A4422081	Capacitor	C698,C718		1.128806	2	375289731.076049
11C1410440	Capacitor	C130,C141,C143, C157,C187,C217, C270,C276,C279, C280,C299,C300, C302,C305,C329, C343,C344,C345, C365,C378,C394, C404,C416,C422, C426,C428,C433, C434,C436,C500, C501,C511,C512, C530,C533,C538, C541,C554,C555, C556,C557,C561, C566,C589,C61,C62, C63,C646,C87		1.128806	51	16783130.571525
11C1501080	Capacitor	C269,C282		1.128806	2	375289731.076049
11C1510390	Capacitor	C377,C379,C406, C415,C472,C474, C513,C516,C523, C525		1.128806	10	82101057.548118
11C2410340	Capacitor	C283		1.128806	1	704977644.692287
11C2510480	Capacitor	C277,C447,C667, C674		1.128806	4	196873384.410843
11C2522880	Capacitor	C59,C60		1.128806	2	375289731.076049
11C2610030	Capacitor	C285,C443,C444		1.128806	3	257514172.353070
11C4501790	Capacitor	C180,C477,C514, C517,C524,C526, C690		1.128806	7	115633865.771428
11C4510280	Capacitor	C442		1.128806	1	704977644.692287

File Name: FWS-7820.rfp
Assembly: 9697782002-D
Ref Des:
Description:

Failure Rate: 9918.731678
MTBF (hrs): 100,819
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
11C4510480	Capacitor	C109,C113,C114, C115,C17,C49,C83, C90		1.128806	8	101746760.035398
11C4515230	Capacitor	C863,C864,C865, C866,C867,C868, C869		1.128806	7	115633865.771428
11C4522290	Capacitor	C261,C301,C387, C462,C694		1.128806	5	159367490.199266
11C4533380	Capacitor	C275		1.128806	1	704977644.692287
11C4556690	Capacitor	C14,C15,C188,C479, C688		1.128806	5	159367490.199266
11C9510050	Capacitor	C508		1.128806	1	704977644.692287
11C9510490	Capacitor	C131,C168,C192, C196,C208,C216, C220,C229,C248, C255,C27,C289,C297, C309,C315,C325, C352,C363,C366, C376,C38,C382,C383, C384,C385,C388, C389,C39,C390,C391, C392,C393,C41,C419, C42,C43,C461,C466, C50,C51,C52,C520, C559,C590,C591, C592,C593,C594, C595,C601,		1.128806	59	14541999.022292
11CA501040	Capacitor	C257,C273,C292, C303,C324,C717, C720,C725		1.128806	8	101746760.035398
11E1510050	Capacitor	C418		1.128806	1	704977644.692287
11E1522680	Capacitor	C206		1.128806	1	704977644.692287

File Name: FWS-7820.rfp
Assembly: 9697782002-D
Ref Des:
Description:

Failure Rate: 9918.731678
MTBF (hrs): 100,819
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
11E2501080	Capacitor	C18,C259,C271,C36,C448,C465,C48,C65,C663,C673,C68,C695,C710,C76,C77		1.128806	15	55479656.844874
11E2501690	Capacitor	C100,C101,C118,C121,C122,C123,C125,C126,C127,C142,C146,C147,C155,C156,C162,C163,C164,C173,C181,C183,C19,C23,C25,C265,C28,C295,C30,C306,C312,C32,C34,C40,C44,C440,C441,C451,C504,C53,C7,C700,C728,C741,C742,C743,C744,C749,C750,C751,C752,C762,C76		1.128806	54	15865848.114680
11E2510010	Capacitor	C1,C102,C107,C110,C111,C112,C12,C3,C56,C57,C58,C79,C81,C85,C86,C87,C88,C89,C93,C95,C97		1.128806	21	40003791.624280
11E2647650	Capacitor	C521,C522		1.128806	2	375289731.076049
11E4433090	Capacitor	C510,C893		1.128806	2	375289731.076049
11E4510440	Capacitor	C287,C445		1.128806	2	375289731.076049
11E9501080	Capacitor	C685,C895		1.128806	2	375289731.076049

File Name: FWS-7820.rfp
Assembly: 9697782002-D
Ref Des:
Description:

Failure Rate: 9918.731678
MTBF (hrs): 100,819
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
11E9501091	Capacitor	C12,C244,C267,C288,C293,C294,C308,C310,C313,C314,C317,C362,C375,C407,C417,C420,C425,C484,C529,C565,C610,C676,C729,C850,C851,C855		1.128806	26	32480878.530766
11E9510050	Capacitor	C877,C880,C885,C886		1.128806	4	196873384.410843
11E9522490	Capacitor	C568,C571,C587,C599,C613,C615,C632,C635,C645,C656,C668,C670,C678,C683,C693,C699,C745,C746,C747,C748,C766,C767,C768,C769,C770,C771,C772,C773,C774,C775,C776,C777,C778,C779,C780,C781,C782,C783,C784,C785,C786,C787,C788,C789,C790,C791,C792,C793,C697		1.128806	70	12288550.464753
11E9522680	Capacitor	C697		1.128806	1	704977644.692287

File Name: FWS-7820.rfp
Assembly: 9697782002-D
Ref Des:
Description:

Failure Rate: 9918.731678
MTBF (hrs): 100,819
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
11E9547490	Capacitor	C20,C22,C26 ,C29, C31,C33,C35		1.128806	7	115633865.771428
11E9547630	Capacitor	C875,C884		1.128806	2	375289731.076049
11E9547680	Capacitor	C327,C328,C 336, C338		1.128806	4	196873384.410843
11E9610080	Capacitor	C334,C380,C 432, C481,C495,C 496, C579,C597,C 616, C862,C870,C 871		1.128806	12	68856937.301178
11E9610190	Capacitor	C734		1.128806	1	704977644.692287
11E9622050	Capacitor	C298,C515,C 602		1.128806	3	257514172.353070
11E9622052	Capacitor	C153,C498,C 665		1.128806	3	257514172.353070
11E9622060	Capacitor	C894		1.128806	1	704977644.692287
11E9622080	Capacitor	C103,C104,C 231, C232,C233,C 234, C235,C236,C 245, C246,C247,C 307, C316,C322,C 326, C337,C342,C 351, C353,C354,C 355, C356,C357,C 358, C359,C360,C 367, C368,C369,C 370, C371,C372,C 373, C374,C395,C 396, C397,C398,C 399, C400,C401,C 402, C408,C409,C 410, C411,C412,C 413,		1.128806	81	10641455.782446

File Name: FWS-7820.rfp
Assembly: 9697782002-D
Ref Des:
Description:

Failure Rate: 9918.731678
MTBF (hrs): 100,819
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
11E9647690	Capacitor	C625,C626,C653		1.128806	3	257514172.353070
11EA510010	Capacitor	C197		1.128806	1	704977644.692287
11EA647010	Capacitor	C319,C320,C321, C330,C331,C332, C339,C340,C341, C347,C348,C349		1.128806	12	68856937.301178
11EB501040	Capacitor	C547,C551,C638, C662,C726,C879, C883,C897		1.128806	8	101746760.035398
11EB522640	Capacitor	C11,C128,C136,C148, C166,C497,C505, C506,C507		1.128806	9	90863428.080946
11EB610050	Capacitor	C539,C644,C654, C660,C666,C896		1.128806	6	133979725.056342
121110106Y	Inductor	L15		4.944252	1	154760964.143460
121110106Z	Inductor	L17		4.944252	1	154760964.143460
121110156P	Inductor	L21,L23		4.944252	2	83201062.149749
121110226X	Inductor	L16,L19,L6		4.944252	3	57363284.375370
1211103677	Inductor	L1,L10,L11,L12,L14,L9		4.944252	6	30055900.223009
1211103677	Inductor	L13	13	6.261938	1	122194949.380030
1212306030	Inductor	FB12,FB24		4.944252	2	83201062.149749
121230603W	Inductor	FB13,FB14,FB22		4.944252	3	57363284.375370
121230603Z	Inductor	FB2,FB3,FB4,FB5,FB6		4.944252	5	35631881.582999
12123A000B	Inductor	FB1,FB10,FB11,FB16, FB17,FB18,FB19,FB8,FB9		4.944252	9	20443842.451049
12123C0005	Inductor	FB21		4.944252	1	154760964.143460
12123C000A	Inductor	FB15		4.944252	1	154760964.143460
12123C000C	Inductor	L2,L3,L4,L5,L7,L8		4.944252	6	30055900.223009
12123C0026	Inductor	FB20		4.944252	1	154760964.143460
12310024A0	Miscellaneous	Y4		19.200000	1	23844262.770939
12310025A3	Miscellaneous	Y3		19.200000	1	23844262.770939
12310027A0	Miscellaneous	Y1		19.200000	1	23844262.770939

File Name: FWS-7820.rfp
Assembly: 9697782002-D
Ref Des:
Description:

Failure Rate: 9918.731678
MTBF (hrs): 100,819
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1231332726	Miscellaneous	Y5		19.200000	1	23844262.770939
1300414848	Semiconductor	D1		7.793411	1	92807310.010983
1301005440	Semiconductor	D11,D14,D16		7.793411	3	35106858.962001
1301005444	Semiconductor	D18		7.793411	1	92807310.010983
1301005450	Semiconductor	Q50		22.463360	1	31642600.748419
1301053040	Semiconductor	D15,D19,D20, D21		7.793411	4	26989084.126235
1301400642	Semiconductor	D2,D4,D8		7.793411	3	35106858.962001
1305099140	Semiconductor	D10,D5,D6,D 7,D9		7.793411	5	21965031.404253
1310222211	Semiconductor	Q83,Q87		22.463360	2	17315095.066101
1310390410	Semiconductor	Q61,Q62		22.463360	2	17315095.066101
1310390411	Semiconductor	Q120		22.463360	1	31642600.748419
1310390413	Semiconductor	Q118,Q119, Q21,Q7, Q86,Q95,Q9 8		22.463360	7	5525968.936223
1314880511	Semiconductor	Q153		22.463360	1	31642600.748419
1315034430	Semiconductor	Q25		22.463360	1	31642600.748419
1315060300	Semiconductor	Q104,Q105, Q129, Q130,Q14,Q 15,Q18, Q19,Q2,Q22, Q23, Q24,Q27,Q2 8,Q3,Q33, Q34,Q35,Q3 7, Q38,Q39,Q4, Q40,Q51, Q55,Q56		22.463360	26	1589867.643171
1315060300	Semiconductor	Q20	13.4	32.092320	1	22148574.219160
1315060300	Semiconductor	Q36	13.8	32.420845	1	21924139.623487
1315070020	Semiconductor	Q1,Q10,Q10 6,Q107, Q11,Q12,Q1 3, Q16,Q26,Q3 2,Q41, Q42,Q44,Q5, Q57,Q59, Q6,Q67,Q77, Q8,Q82, Q88,Q89,Q9 0,Q91, Q92,Q93,Q9 4,Q96, Q97,Q99		22.463360	31	1341506.047544
1315070020	Semiconductor	Q137	40	59.989715	1	11848683.289037
1315200312	Semiconductor	Q80,Q81		22.463360	2	17315095.066101

File Name: FWS-7820.rfp
Assembly: 9697782002-D
Ref Des:
Description:

Failure Rate: 9918.731678
MTBF (hrs): 100,819
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1315230111	Semiconductor	Q134		22.463360	1	31642600.748419
1315230211	Semiconductor	Q114,Q115, Q116, Q117,Q63,Q 70,Q78, Q79,Q84,Q8 5		22.463360	10	3960370.776745
1315443510	Semiconductor	Q30		22.463360	1	31642600.748419
1315700212	Semiconductor	Q54		22.463360	1	31642600.748419
1315700217	Semiconductor	Q121,Q122, Q123, Q124,Q127, Q131, Q132,Q133, Q138, Q139		22.463360	10	3960370.776745
1315703011	Semiconductor	Q29,Q31		22.463360	2	17315095.066101
1430036070	Integrated Circuit	U4		43.803003	1	11739202.588727
1430080650	Integrated Circuit	U13,U40,U55		43.803003	3	4923240.069161
1430082021	Integrated Circuit	U20,U36,U56		43.803003	3	4923240.069161
14309624F0	Integrated Circuit	U10,U3,U5,U 6,U7,U8		43.803003	6	2750969.191556
14309624F0	Integrated Circuit	U9	14.4	115.866133	1	4437986.449835
1440003301	Integrated Circuit	U38	16.5	132.550867	1	3879358.489034
14400C2360	Integrated Circuit	U2	24.1	212.597866	1	2418708.795691
14407517A0	Integrated Circuit	U11		43.803003	1	11739202.588727
1457000080	Integrated Circuit	U37		43.803003	1	11739202.588727
14571G14D0	Integrated Circuit	U24,U25,U26		43.803003	3	4923240.069161
145900AUC1	Integrated Circuit	U35		43.803003	1	11739202.588727
1469128350	Integrated Circuit	U58		11.063278	1	58231413.220643
1482640HC1	Integrated Circuit	U53	15.1	49.152145	1	13525610.019531
14909665T0	Integrated Circuit	U29		43.803003	1	11739202.588727
14S3052400	Integrated Circuit	U43,U44		43.803003	2	6834791.244197
14S3820700	Integrated Circuit	U21		43.803003	1	11739202.588727
14S3902500	Integrated Circuit	U42,U66		43.803003	2	6834791.244197
14S4081102	Integrated Circuit	U14,U49		43.803003	2	6834791.244197
14S4872800	Integrated Circuit	U27		43.803003	1	11739202.588727
14S5912300	Integrated Circuit	U15		26.018600	1	25551442.237972
14S5974741	Integrated Circuit	U33		26.018600	1	25551442.237972
14S5A00702	Integrated Circuit	U64		26.018600	1	25551442.237972
14S5A00821	Integrated Circuit	U41,U46,U47 ,U65		26.018600	4	7696979.559193
14S5A03200	Integrated Circuit	U34,U39		26.018600	2	14194252.866846
14S5A23200	Integrated Circuit	U16		26.018600	1	25551442.237972
14S5A23200	Integrated Circuit	U17	17.8	54.726646	1	12147880.313046
1540710280	Resistor	RP3,RP4		9.971436	2	30043399.401299
1540782080	Resistor	RP1		9.971436	1	51606907.671214
1540782280	Resistor	RP2		9.971436	1	51606907.671214

File Name: FWS-7820.rfp
Assembly: 9697782002-D
Ref Des:
Description:

Failure Rate: 9918.731678
MTBF (hrs): 100,819
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1651528812	Connection	DIMM1,DIM M3		16.184835	2	20390152.380746
1651528813	Connection	DIMM2,DIM M4		16.184835	2	20390152.380746
1651611510	Connection	U1		16.184835	1	35685591.360212
1653002100	Connection	CN11,CN34		16.184835	2	20390152.380746
1653003101	Connection	CN23,CN39,C N40,JP1		16.184835	4	11344857.509064
165300410A	Connection	CN41		16.184835	1	35685591.360212
1653004200	Connection	FP1,FP2		16.184835	2	20390152.380746
165300420F	Connection	CN1		16.184835	1	35685591.360212
165300420Q	Connection	CN42		16.184835	1	35685591.360212
1653005201	Connection	CN43		16.184835	1	35685591.360212
1653008100	Connection	CN30		16.184835	1	35685591.360212
1653205203	Connection	CN14		16.184835	1	35685591.360212
165320820B	Connection	VGA1		16.184835	1	35685591.360212
165321020D	Connection	USB1,USB2		16.184835	2	20390152.380746
1653300100	Connection	FP1(5-7)1		16.184835	1	35685591.360212
1653300102	Connection	CN39(1-2)3, CN40(1-2)2, JP1(1-2)1		16.184835	3	14515880.849373
1653300107	Connection	CN23_2-1		16.184835	1	35685591.360212
1653916121	Connection	CN17		16.184835	1	35685591.360212
165392521J	Connection	CN24		16.184835	1	35685591.360212
1654203630	Connection	CN12		16.184835	1	35685591.360212
1654209830	Connection	PCIE1,PCIE4		16.184835	2	20390152.380746
1654209831	Connection	PCIE2		16.184835	1	35685591.360212
165490700G	Connection	CN18		16.184835	1	35685591.360212
1655004011	Connection	CN19		16.184835	1	35685591.360212
1655004018	Connection	CPU_FAN1,C PU_FAN2, SYS_FAN1		16.184835	3	14515880.849373
1655408120	Connection	ATX_CPU1		16.184835	1	35685591.360212
1655424122	Connection	ATX1		16.184835	1	35685591.360212
1655912032	Connection	CN22		16.184835	1	35685591.360212
175011901H	Miscellaneous	BT1		306.000000	1	1681683.006787
1750220323	Connection	BT1		16.184835	1	35685591.360212
1752002500	Miscellaneous	FS3,FS4		2.400000	2	143944727.196625
1752002700	Miscellaneous	FS1,FS2		2.400000	2	143944727.196625
1812850290	Resistor	R675		69.019322	1	7485159.269379

File Name: FWS-7820.rfp
Assembly: 9697T39302-D
Ref Des:
Description:

Failure Rate: 3291.598381
MTBF (hrs): 303,804
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1050503324	Resistor	R163,R164,R165, R166,R169,R172, R173,R174,R177, R178,R203,R204, R217,R218,R225, R226		2.547039	16	22425139.809646
1050503334	Resistor	R184,R186,R194, R196		2.547039	4	82309758.689546
1050510034	Resistor	R59		2.547039	1	282340674.079668
1050516004	Resistor	R279,R280,R281, R282,R283,R284, R285,R286,R287, R288,R289,R290, R291,R292,R293, R294,R295,R296, R307,R310,R311		2.547039	21	17274945.076062
105A500139	Resistor	R113,R114		2.547039	2	154078778.388085
105A501039	Resistor	R111,R112,R119, R120,R121,R122, R139,R140,R141, R142,R143,R144, R145,R146		2.547039	14	25477245.255648
105A501529	Resistor	R30		2.547039	1	282340674.079668
105A501539	Resistor	R63		2.547039	1	282340674.079668
105A503423	Resistor	R94		2.547039	1	282340674.079668
105A510723	Resistor	R76		2.547039	1	282340674.079668
105A523713	Resistor	R104		2.547039	1	282340674.079668
105A530113	Resistor	R103		2.547039	1	282340674.079668
105A531623	Resistor	R80,R93		2.547039	2	154078778.388085
105A544223	Resistor	R97		2.547039	1	282340674.079668
105A549919	Resistor	R223,R224		2.547039	2	154078778.388085
105A563419	Resistor	R81		2.547039	1	282340674.079668
105A700003	Resistor	R100,R70,R84		2.547039	3	107020754.986850

File Name: FWS-7820.rfp
Assembly: 9697T39302-D
Ref Des:
Description:

Failure Rate: 3291.598381
MTBF (hrs): 303,804
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
105A700009	Resistor	R1,R10,R11, R115, R116,R117,R 118,R12, R13,R14,R15 ,R16, R171,R176,R 2,R21, R243,R244,R 245, R246,R3,R31 ,R312, R32,R334,R3 35,R347, R348,R38,R3 9,R4, R46,R52,R58 ,R62, R86,R87,R9		2.547039	38	9736567.158302
105A70000A	Resistor	R197,R198,R 201, R202,R211,R 212, R300,R301		2.547039	8	43225424.698300
105A701039	Resistor	R101,R102,R 105, R106,R107,R 167, R168,R181,R 182, R187,R188,R 205, R206,R207,R 208, R209,R210,R 213, R214,R215,R 216, R219,R220,R 221, R222,R25,R2 6,R40, R43,R49,R50 ,R56, R57,R64,R66 ,R67, R71,R72,R73 ,R75, R78,R82,R92 ,R95, R96,R98		2.547039	46	8085699.252497

File Name: FWS-7820.rfp
Assembly: 9697T39302-D
Ref Des:
Description:

Failure Rate: 3291.598381
MTBF (hrs): 303,804
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
105A703309	Resistor	R179,R180,R183, R185,R189,R191, R193,R195,R68		2.547039	9	38754445.632391
105A703329	Resistor	R170,R175,R27,R28, R29,R308,R33,R346, R41,R42,R44,R47, R51,R53,R60,R74		2.547039	16	22425139.809646
105A703363	Resistor	R88		2.547039	1	282340674.079668
105A708209	Resistor	R275,R276,R277, R278,R302,R303, R304,R305		2.547039	8	43225424.698300
105A710039	Resistor	R99		2.547039	1	282340674.079668
105A733009	Resistor	R309		2.547039	1	282340674.079668
111161019C	Capacitor	C105,C106		4.744484	2	86049450.747498
1121501690	Capacitor	C143,C144		1.128806	2	375289731.076049
1121501691	Capacitor	C39,C46,C47,C60, C66,C82		1.128806	6	133979725.056342
1124427090	Capacitor	C159,C160,C163, C164,C53,C65		1.128806	6	133979725.056342
1129522790	Capacitor	C117,C118,C119, C120		1.128806	4	196873384.410843
1129601080	Capacitor	C209,C210,C222, C230,C234,C240, C244,C251,C252		1.128806	9	90863428.080946
1129610080	Capacitor	C131,C132,C135, C136,C139,C140, C145,C146,C147, C148,C157,C158		1.128806	12	68856937.301178
1129610260	Capacitor	C109,C110,C111, C112,C183,C184		1.128806	6	133979725.056342

File Name: FWS-7820.rfp
Assembly: 9697T39302-D
Ref Des:
Description:

Failure Rate: 3291.598381
MTBF (hrs): 303,804
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1129710090	Capacitor	C62		1.128806	1	704977644.692287
1129710390	Capacitor	C213,C214,C217, C219,C220,C221, C224,C225,C226, C229,C236,C237, C239,C241,C243, C246,C247,C249		1.128806	18	46478509.590073
1189633151	Capacitor	TC1,TC2		4.744484	2	86049450.747498
11C1510390	Capacitor	C175,C176,C177, C178,C179,C180, C181,C182		1.128806	8	101746760.035398
11C1539840	Capacitor	C133,C134		1.128806	2	375289731.076049
11C2510480	Capacitor	C1,C2		1.128806	2	375289731.076049
11C4501790	Capacitor	C211,C212,C218, C228,C235,C242, C245,C248,C250		1.128806	9	90863428.080946

File Name: FWS-7820.rfp
Assembly: 9697T39302-D
Ref Des:
Description:

Failure Rate: 3291.598381
MTBF (hrs): 303,804
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
11C9510490	Capacitor	C101,C102,C103, C104,C107,C108,C11, C113,C114,C115, C116,C12,C121,C122, C123,C124,C125, C126,C127,C128,C13, C137,C138,C14,C141, C142,C149,C15,C150, C153,C154,C155, C156,C16,C165,C166, C167,C168,C169,C17, C170,C171,C172, C173,C174,C18,C185, C186,C187,C188,		1.128806	80	10772660.612835
11E9501091	Capacitor	C100,C61,C89,C93, C99		1.128806	5	159367490.199266
11E9510050	Capacitor	C44,C74		1.128806	2	375289731.076049
11E9547630	Capacitor	C54		1.128806	1	704977644.692287
11E9610080	Capacitor	C207,C216,C227, C232,C238,C253, C255,C38,C55		1.128806	9	90863428.080946
11EA647010	Capacitor	C161,C162,C208, C215,C223,C231, C233,C254,C256		1.128806	9	90863428.080946
121110686A	Inductor	L2		4.944252	1	154760964.143460
1211122070	Inductor	L1	12.9	6.251031	1	122408145.416588
1212306030	Inductor	FB12,FB13,FB16, FB17,FB18,FB19, FB20,FB21,FB22		4.944252	9	20443842.451049

File Name: FWS-7820.rfp
Assembly: 9697T39302-D
Ref Des:
Description:

Failure Rate: 3291.598381
MTBF (hrs): 303,804
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
12123A000B	Inductor	FB10,FB4,FB5,FB9		4.944252	4	43912872.424775
1214309006	Inductor	CH1,CH10,CH15,CH16,CH17,CH18,CH19,CH2,CH20,CH21,CH22,CH3,CH4,CH5,CH6,CH7,CH8,CH9		4.944252	18	10499568.783631
121430900A	Inductor	CH11,CH12,CH13, CH14		4.944252	4	43912872.424775
123132505D	Miscellaneous	Y1		19.200000	1	23844262.770939
123132505M	Miscellaneous	Y2,Y3		19.200000	2	8854051.752197
1304100250	Optical Device	LED2		79.003355	1	6497172.749112
1304L51460	Optical Device	LED1		79.003355	1	6497172.749112
1315070020	Semiconductor	Q11,Q12,Q13,Q14,Q15,Q16,Q17,Q18,Q19,Q20,Q21,Q22		22.463360	12	3332353.664911
1315230211	Semiconductor	Q10,Q7,Q8,Q9		22.463360	4	9270607.712006
1315230511	Semiconductor	Q3,Q4,Q5,Q6		22.463360	4	9270607.712006
1315720010	Semiconductor	Q1	10	29.400000	1	24176841.139741
1315720010	Semiconductor	Q2		22.463360	1	31642600.748419
1315970211	Semiconductor	U7,U8		22.463360	2	17315095.066101
1440038080	Integrated Circuit	U3		43.803003	1	11739202.588727
1440210AT0	Integrated Circuit	U11	11.7	97.205655	1	5289942.528558
1440210AT0	Integrated Circuit	U12		43.803003	1	11739202.588727
1440580EB0	Integrated Circuit	U5	20.1	166.254942	1	3092914.555730
14S3003700	Integrated Circuit	TF1,TF2,TF3,TF4, TF5,TF6		43.803003	6	2750969.191556
14S3104500	Integrated Circuit	U13,U14,U15		43.803003	3	4923240.069161
14S3112400	Integrated Circuit	U6	8.2	77.065483	1	6672407.828594
14S6325600	Integrated Circuit	U4	7.9	15.551189	1	41426432.817400
1540775082	Resistor	RP1,RP2,RP3,RP4,RP5,RP6		9.971436	6	12090001.526571
1601110201	Connection	SW1		16.184835	1	35685591.360212
1652824204	Connection	CN5		16.184835	1	35685591.360212
1652826200	Connection	CN4		16.184835	1	35685591.360212
1652848205	Connection	CN6		16.184835	1	35685591.360212
165321020D	Connection	CN3		16.184835	1	35685591.360212

**Reliability Prediction
Summary**

File Name: FWS-7820.rfp
Assembly: 9697T39302-D
Ref Des:
Description:

Failure Rate: 3291.598381
MTBF (hrs): 303,804
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1751300006	Relay	RELAY1,REL AY10, RELAY11,REL AY12, RELAY13,REL AY14, RELAY15,REL AY16, RELAY2,REL AY3, RELAY4,REL AY5, RELAY6,REL AY7, RELAY8,REL AY9		19.477355	16	2689762.931351

File Name: FWS-7820.rfp
Assembly: 9697R38X02-D
Ref Des:
Description:

Failure Rate: 1066.750652
MTBF (hrs): 937,426
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1050501054	Resistor	R15		2.547039	1	282340674.079668
1050505134	Resistor	R4		2.547039	1	282340674.079668
1050522614	Resistor	R8		2.547039	1	282340674.079668
1050580614	Resistor	R11		2.547039	1	282340674.079668
1050700334	Resistor	R72,R74,R76 ,R79, R81,R83,R85 ,R91, R92,R93,R94 ,R96, R97		2.547039	13	27342571.921361
1054700289	Resistor	R1		2.547039	1	282340674.079668
105A500103	Resistor	R6		2.547039	1	282340674.079668
105A501039	Resistor	R25,R26		2.547039	2	154078778.388085
105A501139	Resistor	R7		2.547039	1	282340674.079668
105A700003	Resistor	R14,R141,R5 ,R9		2.547039	4	82309758.689546
105A700009	Resistor	R12,R18,R53		2.547039	3	107020754.986850
105A700139	Resistor	R20		2.547039	1	282340674.079668
105A701039	Resistor	R102,R103,R 110, R114,R115,R 116, R117,R118,R 119, R120,R121,R 124, R125,R126,R 127, R128,R129,R 13,R130, R131,R133,R 134, R135,R136,R 137, R138,R139,R 140,R30, R31,R37,R38 ,R39, R45,R48,R49 ,R54, R57,R58,R59 ,R60, R64,R69,R70 ,R78, R82,R84,R87 ,R88, R90,R95,R99		2.547039	52	7175195.948130
105A701529	Resistor	R40		2.547039	1	282340674.079668
105A702039	Resistor	R17		2.547039	1	282340674.079668

File Name: FWS-7820.rfp
Assembly: 9697R38X02-D
Ref Des:
Description:

Failure Rate: 1066.750652
MTBF (hrs): 937,426
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
105A703329	Resistor	R111,R112,R113, R123,R132,R35,R42, R46,R52,R56,R65, R67,R77		2.547039	13	27342571.921361
1112610102	Capacitor	C1,C12		4.744484	2	86049450.747498
1121501691	Capacitor	C20,C8		1.128806	2	375289731.076049
1129701791	Capacitor	C102,C103,C104, C105,C106,C107, C108,C110,C111, C112,C113,C114, C115,C116,C117, C118,C119,C121,C24, C26,C27,C28,C31, C32,C33,C34,C35, C36,C37,C38,C39, C40,C41,C42,C43, C44		1.128806	36	23624151.295955
1189656196	Capacitor	C4		4.744484	1	159663026.715137
118C6331B0	Capacitor	C124,C125,U1,U2,U3		4.744484	5	36944177.000623
11C2501050	Capacitor	C123,C2,C5,C93,C94, C98,C99		1.128806	7	115633865.771428
11C2510480	Capacitor	C16		1.128806	1	704977644.692287
11C4510280	Capacitor	C9		1.128806	1	704977644.692287
11C4522290	Capacitor	C10,C11		1.128806	2	375289731.076049
11C9510490	Capacitor	C100,C122,C95,C96		1.128806	4	196873384.410843
11E2501080	Capacitor	C14,C7		1.128806	2	375289731.076049
11E2510010	Capacitor	C128,C18,C19		1.128806	3	257514172.353070
11E4510440	Capacitor	C17,C23		1.128806	2	375289731.076049
11E9501080	Capacitor	C21		1.128806	1	704977644.692287

File Name: FWS-7820.rfp
Assembly: 9697R38X02-D
Ref Des:
Description:

Failure Rate: 1066.750652
MTBF (hrs): 937,426
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
11E9522490	Capacitor	C45,C46,C47 ,C48, C49,C50,C51 ,C52, C53,C54,C55 ,C56, C57,C58,C59 ,C60, C61,C62,C63 ,C64, C65,C66,C67 ,C68, C69,C70,C71 ,C72, C73,C74,C75 ,C76, C77,C78,C79 ,C80, C81,C82,C83 ,C84, C85,C86,C87 ,C88, C89,C90,C91 ,C92		1.128806	48	17813540.224875
11E9522680	Capacitor	C22		1.128806	1	704977644.692287
11E9610080	Capacitor	C126,C127,C 6		1.128806	3	257514172.353070
11E9647690	Capacitor	C101,C109,C 120,C25, C29,C30		1.128806	6	133979725.056342
121110106W	Inductor	U4		4.944252	1	154760964.143460
12123C0005	Inductor	L2		4.944252	1	154760964.143460
12123C0026	Inductor	L1		4.944252	1	154760964.143460
1301005440	Semiconductor	Q1		22.463360	1	31642600.748419
1314880511	Semiconductor	Q2	57.8	86.596985	1	8208127.933641
1315060300	Semiconductor	U6	17.6	35.669283	1	19927485.520324
1315060300	Semiconductor	U7		22.463360	1	31642600.748419
1430082021	Integrated Circuit	U5	13.5	109.314917	1	4703953.872580
1440087240	Integrated Circuit	U10	15.7	125.955117	1	4082504.479693
14S6308002	Integrated Circuit	U8	14.5	20.401708	1	31577272.495805
1654209830	Connection	U11,U12		16.184835	2	20390152.380746
1654216430	Connection	U13		16.184835	1	35685591.360212