

FWS-7400

Reliability Prediction Report (MTBF)

Summary	Failure Rate: 9414.844179 ppm MTBF: 106,215 Hours
---------	--

Issue date	Approval	Test Engineer
2014/02/21	Tom Lin	Louie Lee

Reliability Prediction (MTBF)

I . Model Name: FWS-7400

II . Prediction Date: February. 21, 2014

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-7400 (M/B: 9697740001-D ; NIM Socket 9697T28101-D):

- Failure Rate: 9414.844179 ppm
- MTBF: 106,215 Hours

**AAEON Reliability Prediction
Summary**

File Name: FWS-7400.rfp
Duty Cycle: 100
Calculation Model: Telcordia Issue 2
Method: Method I Case 3

Failure Rate: 9414.844179
MTBF (hrs): 106,215
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Assembly Name	Part Number	Ref Des	Quantity	Failure Rate	MTBF
FWS-7400	FWS-7400		1	9414.844179	106,215
M/B	9697740001-D		1	9340.005845	107,066
NIM Socket	9697T28101-D		1	91.189610	10,966,162

File Name: FWS-7400.rfp
Assembly: 9697740001-D
Ref Des:
Description:

Failure Rate: 9340.005845
MTBF (hrs): 107,066
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	R234,R301,R344,R55,R74,R812,R813,R814,R820		2.547039	9	38754445.632391
1050501054	Resistor	R254,R500		2.547039	2	154078778.388085
1050502204	Resistor	R1230,R144,R266,R270,R276,R277,R400,R466,R468,R470,R472,R597,R599,R870,R964,R985		2.547039	16	22425139.809646
1050502224	Resistor	R13,R14,R15,R215,R242,R243,R257,R265,R354,R397,R436,R65,R83,R880,R901,R908,R912,R913,R926,R974,R975,R998		2.547039	22	16518584.576317
1050502724	Resistor	R438,R995		2.547039	2	154078778.388085
1050503324	Resistor	R161,R166,R2,R4,R407,R6,R886		2.547039	7	48991237.965885
1050504724	Resistor	R121,R141,R142,R146,R148,R149,R150,R151,R153,R154,R155,R157,R159,R160,R24,R359,R369,R372,R832,R875,R888,R894,R898,R902,R909,R933		2.547039	26	14061076.827148
1050504734	Resistor	R531		2.547039	1	282340674.079668

File Name: FWS-7400.rfp
Assembly: 9697740001-D
Ref Des:
Description:

Failure Rate: 9340.005845
MTBF (hrs): 107,066
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1050505164	Resistor	R416		2.547039	1	282340674.079668
1050506224	Resistor	R10,R12,R8		2.547039	3	107020754.986850
1050507524	Resistor	R235,R261,R890, R907,R938		2.547039	5	67008142.102588
1050508224	Resistor	R280,R303,R309, R310,R314,R324, R330,R331,R337, R367,R368		2.547039	11	32049696.385471
1050510034	Resistor	R201,R216,R221, R240,R262,R441, R856,R88		2.547039	8	43225424.698300
1050511009	Resistor	R183,R785		2.547039	2	154078778.388085
1050515034	Resistor	R941		2.547039	1	282340674.079668
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,R129, R130,R311		2.547039	5	67008142.102588
1050524909	Resistor	R202,R348,R452		2.547039	3	107020754.986850
1050527424	Resistor	R249,R788		2.547039	2	154078778.388085
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
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		2.547039	2	154078778.388085
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

**Reliability Prediction
Summary**

File Name: FWS-7400.rfp
Assembly: 9697740001-D
Ref Des:
Description:

Failure Rate: 9340.005845
MTBF (hrs): 107,066
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
105A500103	Resistor	R59		2.547039	1	282340674.079668
105A500139	Resistor	R1000,R1002 ,R1004, R1006,R1050 ,R1051, R1052,R1053 ,R1095, R1096,R1097 ,R1098, R1121,R1123 ,R1159, R1160,R1228 ,R1229, R1236,R124, R125, R132,R133,R 136, R152,R195,R 198, R218,R222,R 229, R255,R263,R 271, R291,R296,R 300, R329,R339,R 346,		2.547039	93	4062844.618986
105A500239	Resistor	R796		2.547039	1	282340674.079668
105A501003	Resistor	R322		2.547039	1	282340674.079668

File Name: FWS-7400.rfp
Assembly: 9697740001-D
Ref Des:
Description:

Failure Rate: 9340.005845
MTBF (hrs): 107,066
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
105A501039	Resistor	R1061,R1062 ,R1063, R1064,R1076 ,R1077, R1078,R1079 ,R1081, R1082,R1083 ,R1084, R1167,R1168 ,R117, R1180,R1181 ,R1184, R1185,R197, R225, R226,R228,R 233, R282,R292,R 321, R342,R343,R 347, R350,R351,R 352, R356,R361,R 362, R371,R380,R 403,		2.547039	184	2076076.371570
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,R931		2.547039	2	154078778.388085
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
105A506834	Resistor	R67		2.547039	1	282340674.079668
105A507503	Resistor	R105,R782		2.547039	2	154078778.388085
105A510009	Resistor	R104,R107,R 17,R19, R21,R58,R73 ,R837, R84,R844		2.547039	10	35079934.879747

File Name: FWS-7400.rfp
Assembly: 9697740001-D
Ref Des:
Description:

Failure Rate: 9340.005845
MTBF (hrs): 107,066
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
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, R745,R746,R747, R748,R755,R756, R815,R822,R823		2.547039	18	20032117.836120
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	R1011,R1012,R1013, R1014,R1015,R1016, R1017,R1018,R1124, R1125,R1126,R1127, R564,R565,R566, R567,R711,R712		2.547039	18	20032117.836120
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
105A700003	Resistor	R103,R1232,R1233, R1234,R1235,R28, R33,R34,R36,R37, R47,R50,R52,R57, R778,R824		2.547039	16	22425139.809646

File Name: FWS-7400.rfp
Assembly: 9697740001-D
Ref Des:
Description:

Failure Rate: 9340.005845
MTBF (hrs): 107,066
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
105A700009	Resistor	C487,C488,C489, C490,C491,C492, C493,C494,C495, C496,C497,C500, C503,C505,C510, C513,C594,C595, C598,C599,C610, C629,C645,C647, C677,C684,C712, C733,C743,C745, C747,C752,R102, R1027,R1028,R1029, R1030,R1031,R10		2.547039	192	1990706.391078
105A700203	Resistor	R298,R317		2.547039	2	154078778.388085
105A702263	Resistor	R23,R49,R56,R76, R77,R78		2.547039	6	56573956.677649
105A703309	Resistor	R137,R138,R139		2.547039	3	107020754.986850
105A704709	Resistor	R1001,R1003,R1005, R1023,R1024,R1025, R1026,R1039,R1040, R1041,R1042,R1120, R1122,R1139,R1140, R1151,R1152,R1153, R999		2.547039	19	19019185.781770
105A705129	Resistor	R25,R26,R27,R29, R30,R31		2.547039	6	56573956.677649
105A705609	Resistor	R184,R783		2.547039	2	154078778.388085
105A710009	Resistor	R829		2.547039	1	282340674.079668
105A710039	Resistor	R89		2.547039	1	282340674.079668
105A739039	Resistor	R360,R377		2.547039	2	154078778.388085

File Name: FWS-7400.rfp
Assembly: 9697740001-D
Ref Des:
Description:

Failure Rate: 9340.005845
MTBF (hrs): 107,066
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
106B747030	Resistor	RT2		7.724580	1	66247589.526685
106BA01033	Resistor	R140,R903,RT1		7.724580	3	27814800.254496
1121415090	Capacitor	C525		1.128806	1	704977644.692287
1121501691	Capacitor	C103,C107,C108, C109,C110,C113, C121,C127,C128, C129,C130,C131, C132,C133,C134, C153,C154,C155, C156,C157,C158,C16, C162,C164,C165,C17, C173,C175,C178,C18, C186,C188,C189,C19, C195,C201,C203, C204,C205,C206, C209,C210,C213,		1.128806	386	2266230.847308
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
1124418190	Capacitor	C28,C29,C30,C31, C356,C361,C362, C363,C365,C366, C367,C368,C465, C466,C467,C468, C469,C470,C471, C472		1.128806	20	41950408.034165

File Name: FWS-7400.rfp
Assembly: 9697740001-D
Ref Des:
Description:

Failure Rate: 9340.005845
MTBF (hrs): 107,066
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1124427090	Capacitor	C207,C208,C310, C311,C312,C313, C327,C328,C329, C330,C379,C380, C400,C401		1.128806	14	59316298.011235
1124468090	Capacitor	C224,C262		1.128806	2	375289731.076049
1124533191	Capacitor	C447,C457,C62,C63		1.128806	4	196873384.410843
1124533280	Capacitor	C10,C11,C12		1.128806	3	257514172.353070
1124547190	Capacitor	C383,C384,C385, C386,C387,C388, C421,C423		1.128806	8	101746760.035398
1129522790	Capacitor	C283,C754,C755, C773,C826		1.128806	5	159367490.199266
1129610260	Capacitor	C343,C345,C346, C347		1.128806	4	196873384.410843
1129710091	Capacitor	C43,C454,C456,C460, C52,C66		1.128806	6	133979725.056342
1129710391	Capacitor	C42,C438		1.128806	2	375289731.076049
1129722091	Capacitor	C45,C58,C71		1.128806	3	257514172.353070
1174518180	Capacitor	CP1,CP2,CP3,CP4		1.128806	4	196873384.410843
1181627194	Capacitor	C27,C3,C4,C46,C5, C6		4.744484	6	31179134.677521
1189656196	Capacitor	C123,C124,C125, C142,C143,C163, C176,C177,C193, C265,C268,C275, C409,C410,C411,C72, C73,C77,C78,C80, C81,C84,C867		4.744484	23	8607115.328670
1189682199	Capacitor	C104,C105,C146,C15, C179,C220,C221		4.744484	7	26949727.707925

File Name: FWS-7400.rfp
Assembly: 9697740001-D
Ref Des:
Description:

Failure Rate: 9340.005845
MTBF (hrs): 107,066
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
11C1510390	Capacitor	C184,C187,C190, C191,C215,C253, C314,C317,C322, C325,C335,C338, C339,C342,C39,C428, C429,C695,C696, C697,C698,C699, C700,C701,C702, C703,C704,C705, C706,C707,C708, C709,C710		1.128806	33	25726061.200507
11C1522390	Capacitor	C144,C145,C243, C250		1.128806	4	196873384.410843
11C2410390	Capacitor	C280		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		1.128806	2	375289731.076049
11E1547650	Capacitor	C14,C25,C26,C446		1.128806	4	196873384.410843
11E4433090	Capacitor	C32		1.128806	1	704977644.692287

**Reliability Prediction
Summary**

File Name: FWS-7400.rfp
Assembly: 9697740001-D
Ref Des:
Description:

Failure Rate: 9340.005845
MTBF (hrs): 107,066
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

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, C439,C452,C483, C506,C507,C508, C519,C520,C521, C523,C527,C537, C539,C541,C544, C549,C552,C554,		1.128806	52	16465757.036261
11E9522490	Capacitor	C2,C437,C442,C450, C48,C49,C50,C54		1.128806	8	101746760.035398
11E9547680	Capacitor	C219,C229,C434, C435,C455,C55,C56, C83		1.128806	8	101746760.035398

File Name: FWS-7400.rfp
Assembly: 9697740001-D
Ref Des:
Description:

Failure Rate: 9340.005845
MTBF (hrs): 107,066
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
11E9610080	Capacitor	C621,C623,C625, C627,C635,C637, C639,C641,C668, C669,C670,C671, C739,C740,C741, C742,C748,C749, C750,C751,C775, C777,C787,C789, C814,C815,C859,C86, C860,C863,C864, C879,C880,C92		1.128806	34	24984844.161172
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		1.128806	39	21841170.168719

File Name: FWS-7400.rfp
Assembly: 9697740001-D
Ref Des:
Description:

Failure Rate: 9340.005845
MTBF (hrs): 107,066
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
11E9622080	Capacitor	C622,C624,C626, C628,C634,C636, C638,C640,C776, C778,C786,C788		1.128806	12	68856937.301178
121110100F	Inductor	L13		4.944252	1	154760964.143460
1211103372	Inductor	L4	17.9	6.811250	1	112340203.257693
1211103372	Inductor	L3,L5		4.944252	2	83201062.149749
1211103671	Inductor	L1,L12		4.944252	2	83201062.149749
1212306030	Inductor	FB2,FB21,FB22,FB23, FB24,FB4,FB5		4.944252	7	25970990.056682
12123B000L	Inductor	FB1		4.944252	1	154760964.143460
12123C000C	Inductor	L10,L11,L6,L7,L8, L9		4.944252	6	30055900.223009
12123C0010	Inductor	FB10,FB11,F B12, FB13,FB14,F B15, FB16,FB17,F B18, FB19,FB20,F B27, FB28,FB29,F B3,FB30, FB35,FB36,F B6,FB7, FB9		4.944252	21	9043621.568822
123132505G	Miscellaneous	Y1,Y3,Y4,Y5, Y6,Y7, Y8		19.200000	7	2747550.850695
1231332721	Miscellaneous	Y2		19.200000	1	23844262.770939
12G15705007X	Connection	SATA2		16.184835	1	35685591.360212
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,D39,D4		7.793411	3	35106858.962001
1304400500	Optical Device	LED1		79.003355	1	6497172.749112
1305040241	Semiconductor	D15,D16,D17, D18, D19,D20,D21, D22		7.793411	8	14161142.003130
1305099140	Semiconductor	D1,D2,D23,D24,D26, D5,D6		7.793411	7	16052497.121446

File Name: FWS-7400.rfp
Assembly: 9697740001-D
Ref Des:
Description:

Failure Rate: 9340.005845
MTBF (hrs): 107,066
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
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	Q30,Q31,Q3 2,Q33, Q34,Q35,Q4 0,Q46, Q47,Q48,Q6 1		22.463360	11	3618924.681337
1311138610	Semiconductor	Q84,Q85,Q8 6,Q87, Q88,Q89,Q9 0,Q91, Q93,Q94,Q9 5,Q96		22.463360	12	3332353.664911
1311390612	Semiconductor	Q56		22.463360	1	31642600.748419
1314043113	Semiconductor	VR1	14	32.586052	1	21812986.853140
1314108412	Semiconductor	U15		22.463360	1	31642600.748419
1314895510	Semiconductor	U14		22.463360	1	31642600.748419
1314895510	Semiconductor	U6	14.6	33.085472	1	21483723.466153
1315034430	Semiconductor	Q29,Q43,Q4 4,Q45		22.463360	4	9270607.712006
1315190100	Semiconductor	U26,U36		22.463360	2	17315095.066101
1315200312	Semiconductor	Q55		22.463360	1	31642600.748419
1315230114	Semiconductor	Q60		22.463360	1	31642600.748419
1315230511	Semiconductor	Q63,Q66,Q7 3,Q74		22.463360	4	9270607.712006
1315503010	Semiconductor	Q10,Q14,Q1 6,Q18, Q21,Q23,Q8, Q9		22.463360	8	4877097.849338
1315700211	Semiconductor	Q1,Q102,Q1 03,Q104, Q105,Q106, Q107, Q108,Q19,Q 2,Q20,Q3, Q36,Q37,Q3 8,Q4,Q42, Q49,Q5,Q50, Q51,Q53, Q54,Q58,Q5 9,Q6,Q64, Q65,Q67,Q6 8,Q69, Q70,Q71,Q7 2,Q75, Q76,Q77		22.463360	37	1130263.415305
1315700212	Semiconductor	Q82		22.463360	1	31642600.748419

File Name: FWS-7400.rfp
Assembly: 9697740001-D
Ref Des:
Description:

Failure Rate: 9340.005845
MTBF (hrs): 107,066
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1315703011	Semiconductor	Q41	15.7	34.015979	1	20896036.312396
1315703011	Semiconductor	Q13,Q15,Q17,Q22,Q28		22.463360	5	7551839.591592
1315970211	Semiconductor	U32,U33		22.463360	2	17315095.066101
1430958200	Integrated Circuit	U1	13.9	112.184128	1	4583646.010847
144082H810	Integrated Circuit	U11	15.2	121.984596	1	4215387.403076
1482640HC0	Integrated Circuit	U49		26.018600	1	25551442.237972
14S1035803	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
14S4258300	Integrated Circuit	U21	25.1	225.864594	1	2276639.820483
14S4258300	Integrated Circuit	U22	20.4	169.385027	1	3035760.239529
14S4258300	Integrated Circuit	U23,U24,U28,U29		43.803003	4	3879156.910661
14S4519500	Integrated Circuit	U16		43.803003	1	11739202.588727
14S4872800	Integrated Circuit	U38		43.803003	1	11739202.588727
14S5912300	Integrated Circuit	U7		26.018600	1	25551442.237972
14S5A01430	Integrated Circuit	U20		26.018600	1	25551442.237972
14S5A23200	Integrated Circuit	U27,U35		43.803003	2	6834791.244197
14S6206403	Integrated Circuit	U48		11.063278	1	58231413.220643
14S6308002	Integrated Circuit	U39,U40,U41,U42,U46,U47		11.063278	6	12335628.727423
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	Connection	SW1		16.184835	1	35685591.360212
16515C049A	Connection	DIMM1,DIMM3		16.184835	2	20390152.380746
1651611500	Connection	U3		16.184835	1	35685591.360212
165251220A	Connection	LAN1,LAN2,LAN3,LAN4		16.184835	4	11344857.509064
165251420B	Connection	LAN5,LAN6		16.184835	2	20390152.380746
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	JP2		16.184835	1	35685591.360212
1653004200	Connection	FP1,FP2		16.184835	2	20390152.380746
165300420F	Connection	KB/MS1		16.184835	1	35685591.360212
165300420Q	Connection	CN16		16.184835	1	35685591.360212
165320520Y	Connection	COM2		16.184835	1	35685591.360212

File Name: FWS-7400.rfp
Assembly: 9697740001-D
Ref Des:
Description:

Failure Rate: 9340.005845
MTBF (hrs): 107,066
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
165320820B	Connection	VGA1		16.184835	1	35685591.360212
165321020D	Connection	USB2		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
1654900701	Connection	SATA5,SATA 6		16.184835	2	20390152.380746
1655004011	Connection	CN11,CN15,C N7		16.184835	3	14515880.849373
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	Miscellaneous	BT1		306.000000	1	1681683.006787
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
1752002700	Miscellaneous	FS1,FS2		2.400000	2	143944727.196625
1812850290	Resistor	R173		69.019322	1	7485159.269379

File Name: FWS-7400.rfp
Assembly: 9697T28101-D
Ref Des:
Description:

Failure Rate: 91.189610
MTBF (hrs): 10,966,162
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
11C9510490	Capacitor	C1,C18,C22, C26,C30, C33		1.128806	6	133979725.056342
11E9522490	Capacitor	C10,C11,C12 ,C13, C14,C15,C16 ,C17,C2, C3,C4,C5,C6, C7,C8, C9		1.128806	16	52112480.802928
11C2501050	Capacitor	C19,C23,C25 ,C27, C29,C31,C34		1.128806	7	115633865.771428
165424920A	Connection	CN1		16.184835	1	35685591.360212
1654282205	Connection	CN2		16.184835	1	35685591.360212
1112610102	Capacitor	C32,C35		4.744484	2	86049450.747498