

# FWS-7350

## Reliability Prediction Report (MTBF)

Summary	Failure Rate: 9146.251125 ppm MTBF: 109,334 Hours
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Issue date

Approval

Test Engineer

2014/07/30

Tom Lin

Max Chang

# Reliability Prediction (MTBF)

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**I . Model Name:** FWS-7350

**II . Prediction Date:** July, 30, 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-7350 (9697735004-D):

- Failure Rate: 9146.251125 ppm
- MTBF: 109,334 Hours

**AAEON Reliability Prediction  
Summary**

**File Name:** FWS-7350.rfp  
**Duty Cycle:** 100  
**Calculation Model:** Telcordia Issue 2  
**Method:** Method I Case 3

**Failure Rate:** 9146.251125  
**MTBF (hrs):** 109,334  
**Temperature:** 30  
**Environment:** GF, GU - Ground Fixed, Uncontrolled

Assembly Name	Part Number	Ref Des	Quantity	Failure Rate	MTBF
FWS-7350	9697735004-D		1	9146.251125	109,334

**File Name:** FWS-7350.rfp  
**Assembly:** 9697735004-D  
**Ref Des:**  
**Description:**

**Failure Rate:** 9146.251125  
**MTBF (hrs):** 109,334  
**Temperature:** 30  
**Environment:** GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1050500104	Resistor	R10		2.547039	1	282340674.079668
1050501004	Resistor	R197,R203,R46,R564,R566,R596,R605,R61		2.547039	8	43225424.698300
1050501054	Resistor	R291,R411,R733		2.547039	3	107020754.986850
1050502204	Resistor	R285,R515,R681,R727,R776,R841,R845,R852,R853,R880		2.547039	10	35079934.879747
1050502224	Resistor	R140,R248,R249,R253,R254,R299,R313,R324,R325,R326,R327,R338,R349,R350,R37,R380,R43,R689,R708,R711,R712,R713,R716,R762,R787,R802,R803,R804,R805		2.547039	29	12652760.276502
1050502234	Resistor	R251,R64		2.547039	2	154078778.388085
1050502724	Resistor	R175		2.547039	1	282340674.079668
1050503324	Resistor	R121,R125,R18,R543,R561,R627,R638,R793,R794		2.547039	9	38754445.632391
1050504324	Resistor	R173		2.547039	1	282340674.079668

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1050504724	Resistor	R100,R101,R102, R103,R104,R106, R108,R120,R127, R259,R322,R409, R453,R456,R47, R529,R530,R613,R614, R616,R659,R706, R707,R748,R751, R777,R779,R820,R83, R836,R894,R895,R90, R93,R94,R95,R96, R97,R98,R99		2.547039	40	9263254.152485
1050505633	Resistor	R540		2.547039	1	282340674.079668
1050506224	Resistor	R35,R544,R555		2.547039	3	107020754.986850
1050507530	Resistor	R152,R163,R166		2.547039	3	107020754.986850
1050508224	Resistor	R130,R131,R1321, R329,R330,R344, R353,R363,R364, R366,R367,R369, R552,R631,R647, R649,R667,R678, R745,R884		2.547039	20	18104712.511396
1050510034	Resistor	R132,R134,R135, R136,R328,R336, R382,R384,R390, R563,R565,R622, R672,R7,R773,R858, R860		2.547039	17	21160422.299251
1050512104	Resistor	R577		2.547039	1	282340674.079668

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1050512724	Resistor	R290,R660		2.547039	2	154078778.388085
1050516204	Resistor	R572,R609		2.547039	2	154078778.388085
1050521024	Resistor	R738		2.547039	1	282340674.079668
1050522004	Resistor	R246		2.547039	1	282340674.079668
1050522034	Resistor	R266		2.547039	1	282340674.079668
1050523764	Resistor	R571,R587		2.547039	2	154078778.388085
1050524004	Resistor	R282,R671,R741		2.547039	3	107020754.986850
1050524314	Resistor	R57		2.547039	1	282340674.079668
1050525514	Resistor	R765		2.547039	1	282340674.079668
1050525524	Resistor	R635		2.547039	1	282340674.079668
1050526124	Resistor	R153,R167		2.547039	2	154078778.388085
1050527034	Resistor	R2		2.547039	1	282340674.079668
1050530004	Resistor	R461		2.547039	1	282340674.079668
1050530124	Resistor	R630		2.547039	1	282340674.079668
1050530164	Resistor	R582,R599		2.547039	2	154078778.388085
1050532434	Resistor	R261		2.547039	1	282340674.079668
1050532464	Resistor	R573		2.547039	1	282340674.079668
1050540204	Resistor	R634,R652		2.547039	2	154078778.388085
1050547004	Resistor	R168,R169		2.547039	2	154078778.388085
1050549964	Resistor	R301,R304,R644,R646,R742		2.547039	5	67008142.102588
1050553614	Resistor	R594		2.547039	1	282340674.079668
1050556269	Resistor	R263,R548		2.547039	2	154078778.388085
1050557614	Resistor	R157		2.547039	1	282340674.079668
1050569814	Resistor	R297		2.547039	1	282340674.079668
1050580604	Resistor	R597		2.547039	1	282340674.079668
1050580614	Resistor	R56		2.547039	1	282340674.079668
1050586604	Resistor	R191		2.547039	1	282340674.079668
1050588724	Resistor	R243,R842		2.547039	2	154078778.388085
1050701504	Resistor	R410,R683,R722,R723,R754		2.547039	5	67008142.102588
1050702704	Resistor	R372,R378,R389,R394,R397,R398,R400,R401,R402,R403,R405,R406,R887,R888		2.547039	14	25477245.255648
1050708234	Resistor	R11		2.547039	1	282340674.079668
1050727009	Resistor	R663		2.547039	1	282340674.079668
1053510009	Resistor	R589		2.547039	1	282340674.079668

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1059700001	Resistor	R225,R458,R463, R464,R465,R878		2.547039	6	56573956.677649
105A500103	Resistor	R149,R16,R161		2.547039	3	107020754.986850
105A500113	Resistor	R189		2.547039	1	282340674.079668
105A500133	Resistor	R199,R72		2.547039	2	154078778.388085
105A500139	Resistor	R142,R176,R182, R185,R201,R206, R244,R260,R272, R294,R307,R314, R316,R320,R323, R356,R365,R498, R574,R578,R584, R602,R619,R624, R676,R704,R728, R735,R740,R746, R749,R769,R775, R782,R825,R834, R876		2.547039	37	9991988.939157
105A501003	Resistor	R240		2.547039	1	282340674.079668



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105A501039	Resistor	R13,R15,R17 8,R187, R195,R21,R2 27,R27, R270,R274,R 288, R289,R293,R 295, R300,R347,R 355, R358,R359,R 360, R375,R376,R 392, R419,R420,R 421, R422,R423,R 442,R45, R451,R452,R 454, R455,R50,R5 25,R527, R528,R531,R 534, R535,R536,R 549, R628,R645,R 653, R662,R665,R 668, R		2.547039	82	4596628.018709
105A501233	Resistor	R854		2.547039	1	282340674.079668
105A501323	Resistor	R585		2.547039	1	282340674.079668
105A501529	Resistor	R124		2.547039	1	282340674.079668
105A501539	Resistor	R19,R542,R5 62,R790		2.547039	4	82309758.689546
105A502039	Resistor	R3,R538,R59 8,R600, R875		2.547039	5	67008142.102588
105A503039	Resistor	R374,R539		2.547039	2	154078778.388085
105A503309	Resistor	R333,R334,R 361, R391,R80,R8 38,R89, R92		2.547039	8	43225424.698300
105A505109	Resistor	R180,R250,R 279, R608,R654,R 679, R694,R695,R 696, R697,R718,R 719, R725,R88		2.547039	14	25477245.255648

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105A505123	Resistor	R8		2.547039	1	282340674.079668
105A505923	Resistor	R186		2.547039	1	282340674.079668
105A506829	Resistor	R357,R377		2.547039	2	154078778.388085
105A506834	Resistor	R877		2.547039	1	282340674.079668
105A507533	Resistor	R154		2.547039	1	282340674.079668
105A510009	Resistor	R115,R116,R117, R118,R143,R146, R147,R28,R34,R36, R48,R547,R560,R570, R593,R603,R701,R71, R84,R85,R86,R87		2.547039	22	16518584.576317
105A515009	Resistor	R192,R194,R205, R460,R516,R62		2.547039	6	56573956.677649
105A515034	Resistor	R537		2.547039	1	282340674.079668
105A515813	Resistor	R162		2.547039	1	282340674.079668
105A520533	Resistor	R14,R541		2.547039	2	154078778.388085
105A522133	Resistor	R166		2.547039	1	282340674.079668
105A523723	Resistor	R341		2.547039	1	282340674.079668
105A530113	Resistor	R734		2.547039	1	282340674.079668
105A530123	Resistor	R340		2.547039	1	282340674.079668
105A534823	Resistor	R620		2.547039	1	282340674.079668
105A547513	Resistor	R160		2.547039	1	282340674.079668
105A548723	Resistor	R12		2.547039	1	282340674.079668
105A548733	Resistor	R1		2.547039	1	282340674.079668
105A549919	Resistor	R312		2.547039	1	282340674.079668
105A551119	Resistor	R550,R757		2.547039	2	154078778.388085
105A568103	Resistor	R198		2.547039	1	282340674.079668
105A573223	Resistor	R65		2.547039	1	282340674.079668
105A590900	Resistor	R623		2.547039	1	282340674.079668
105A595323	Resistor	R629		2.547039	1	282340674.079668

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**Description:**

**Failure Rate:** 9146.251125  
**MTBF (hrs):** 109,334  
**Temperature:** 30  
**Environment:** GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
105A700003	Resistor	R150,R151,R164, R165,R179,R193, R196,R208,R209, R210,R212,R223, R235,R265,R546, R553,R554,R581, R595,R604,R650,R66, R74,R747,R75,R78, R829,R830,R831, R832,R879		2.547039	31	11861900.957214
105A700009	Resistor	R105,R107,R111, R114,R119,R122, R126,R128,R158, R159,R172,R177, R184,R188,R20,R204, R215,R218,R220, R222,R228,R230, R231,R232,R233, R237,R239,R24,R245, R271,R273,R276, R277,R280,R286,R29, R298,R303,R305, R310,R32,R335,R337, R346,R38,R40,R413, R417,R418,R44		2.547039	149	2556056.573462
105A700203	Resistor	R155,R156,R211		2.547039	3	107020754.986850
105A701003	Resistor	R636		2.547039	1	282340674.079668
105A701009	Resistor	R200		2.547039	1	282340674.079668

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105A701053	Resistor	R881		2.547039	1	282340674.079668
105A701069	Resistor	R241		2.547039	1	282340674.079668
105A702039	Resistor	R874		2.547039	1	282340674.079668
105A702263	Resistor	R319,R370,R387,R63,R813,R826,R827, R840		2.547039	8	43225424.698300
105A702269	Resistor	R60,R9		2.547039	2	154078778.388085
105A703909	Resistor	R818		2.547039	1	282340674.079668
105A705129	Resistor	R139,R141,R23,R39,R41,R44		2.547039	6	56573956.677649
105A708209	Resistor	R844,R851,R855		2.547039	3	107020754.986850
105A710009	Resistor	R91		2.547039	1	282340674.079668
105A710039	Resistor	R181,R229		2.547039	2	154078778.388085
105A716533	Resistor	R171,R621		2.547039	2	154078778.388085
105A733009	Resistor	R264,R499,R500,R501,R502,R503,R504,R505,R506,R507,R508,R509,R510,R511,R512,R513,R514,R518,R521,R675		2.547039	20	18104712.511396
105A747009	Resistor	R524		2.547039	1	282340674.079668
105A756039	Resistor	R5		2.547039	1	282340674.079668
105A768009	Resistor	R207		2.547039	1	282340674.079668
106B510034	Resistor	RT2,RT3		2.547039	2	154078778.388085
106BA01033	Resistor	R691,R791		2.547039	2	154078778.388085
106BA22034	Resistor	RT1,RT4		2.547039	2	154078778.388085
1121415090	Capacitor	C159,C556		1.128806	2	375289731.076049
1121501680	Capacitor	C142,C170,C469,C516,C539,C543		1.128806	6	133979725.056342
1121501690	Capacitor	C380,C442,C445, C446		1.128806	4	196873384.410843
1121501691	Capacitor	C457		1.128806	1	704977644.692287
1121533480	Capacitor	C43		1.128806	1	704977644.692287
1121747890	Capacitor	C128		1.128806	1	704977644.692287
1122501780	Capacitor	C154		1.128806	1	704977644.692287
1124418090	Capacitor	C189,C190		1.128806	2	375289731.076049

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1124418190	Capacitor	C286,C287,C288, C289,C290,C291, C292,C293,C299, C300,C301,C302, C303,C304,C305, C306,C679,C680, C681,C682		1.128806	20	41950408.034165
1124420090	Capacitor	C204,C211		1.128806	2	375289731.076049
1124427090	Capacitor	C199		1.128806	1	704977644.692287
1124433090	Capacitor	C149		1.128806	1	704977644.692287
1124433190	Capacitor	C48		1.128806	1	704977644.692287
1124522280	Capacitor	C116,C12,C135		1.128806	3	257514172.353070
1124522290	Capacitor	C334		1.128806	1	704977644.692287
1124522680	Capacitor	C124,C125		1.128806	2	375289731.076049
1124533191	Capacitor	C147,C164,C444,C55		1.128806	4	196873384.410843
1124533280	Capacitor	C10,C140,C182,C363, C47,C9		1.128806	6	133979725.056342
1124547190	Capacitor	C138		1.128806	1	704977644.692287
1129522790	Capacitor	C297,C298,C616, C620		1.128806	4	196873384.410843
1129610080	Capacitor	C156,C240,C241, C249,C279,C322, C415,C430,C473,C50, C502,C508,C57,C58, C59,C595,C618,C62, C633,C652,C654, C663,C665,C67,C674, C687,C70,C71,C73, C74,C8,C83,C84,C85, C86,C90,C91		1.128806	37	22998172.632301
1129610260	Capacitor	C659,C660,C661, C662		1.128806	4	196873384.410843
1129710090	Capacitor	C39		1.128806	1	704977644.692287

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1129710091	Capacitor	C141,C150		1.128806	2	375289731.076049
1129710390	Capacitor	C152,C158,C410, C437,C448,C456		1.128806	6	133979725.056342
1129722091	Capacitor	C283,C284,C694, C695		1.128806	4	196873384.410843
1174518180	Capacitor	CP1,CP2,CP3,CP4		1.128806	4	196873384.410843
1181610196	Capacitor	C35		1.128806	1	704977644.692287
1181627194	Capacitor	C20		1.128806	1	704977644.692287
1181627197	Capacitor	C33		1.128806	1	704977644.692287
1189610153	Capacitor	C129,C136,C167, C220,C223,C495, C522,C578,C676		1.128806	9	90863428.080946
1189633151	Capacitor	C348,C349,C350, C351		1.128806	4	196873384.410843
1189647187	Capacitor	C327,C331,C341, C378		1.128806	4	196873384.410843
1189656196	Capacitor	C126,C239,C274, C278,C28,C30,C31, C32,C5		1.128806	9	90863428.080946
118C682190	Capacitor	C109,C110,C130		1.128806	3	257514172.353070
11A2410240	Capacitor	C233,C597		1.128806	2	375289731.076049
11A4410180	Capacitor	C131		1.128806	1	704977644.692287
11A4418280	Capacitor	C137		1.128806	1	704977644.692287
11A4430090	Capacitor	C192,C45		1.128806	2	375289731.076049
11C1522390	Capacitor	C41,C42		1.128806	2	375289731.076049
11C1533890	Capacitor	C155		1.128806	1	704977644.692287
11C1610090	Capacitor	C145,C146,C173		1.128806	3	257514172.353070
11C2410390	Capacitor	C497		1.128806	1	704977644.692287
11C2610030	Capacitor	C324		1.128806	1	704977644.692287
11C4501380	Capacitor	C325,C333		1.128806	2	375289731.076049

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Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
11C4501790	Capacitor	C103,C105,C112,C113,C114,C115,C168,C169,C171,C172,C180,C181,C185,C186,C188,C191,C227,C254,C509,C510,C518,C520,C524,C528,C53,C530,C536,C538,C54,C564,C565,C566,C567,C568,C569,C570,C571,C670,C671,C677,C678,C696,C697,C698,C699,C700,C78,C79		1.128806	48	17813540.224875
11C4512290	Capacitor	C127		1.128806	1	704977644.692287
11C4522290	Capacitor	C144,C610		1.128806	2	375289731.076049
11C4533380	Capacitor	C151,C500,C501		1.128806	3	257514172.353070
11C4582190	Capacitor	C7		1.128806	1	704977644.692287
11C9510490	Capacitor	C428		1.128806	1	704977644.692287
11E1510050	Capacitor	C196,C197,C232,C337,C338		1.128806	5	159367490.199266
11E1522060	Capacitor	C326,C328,C329,C330,C339,C342		1.128806	6	133979725.056342
11E1522680	Capacitor	C222,C277,C427,C487,C490		1.128806	5	159367490.199266

**Reliability Prediction  
Summary**

**File Name:** FWS-7350.rfp  
**Assembly:** 9697735004-D  
**Ref Des:**  
**Description:**

**Failure Rate:** 9146.251125  
**MTBF (hrs):** 109,334  
**Temperature:** 30  
**Environment:** GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
11E2501690	Capacitor	C100,C101,C106, C107,C11,C132,C133, C134,C139,C14,C153, C157,C16,C160,C17, C177,C178,C18,C183, C187,C194,C195,C2, C200,C202,C205, C206,C207,C21,C210, C214,C215,C216, C217,C218,C219,C22, C221,C224,C226, C228,C229,C23,C231, C234,C235,C236, C237,C238,C24,C24		1.128806	217	4014349.577074
11E2510060	Capacitor	C121,C122,C123, C364,C371,C376		1.128806	6	133979725.056342
11E4433090	Capacitor	C208,C212,C540, C591,C673		1.128806	5	159367490.199266
11E9501080	Capacitor	C344,C44		1.128806	2	375289731.076049



**Reliability Prediction  
Summary**

**File Name:** FWS-7350.rfp  
**Assembly:** 9697735004-D  
**Ref Des:**  
**Description:**

**Failure Rate:** 9146.251125  
**MTBF (hrs):** 109,334  
**Temperature:** 30  
**Environment:** GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
11E9501091	Capacitor	C102,C15,C184,C225,C248,C252,C255,C259,C270,C271,C3,C321,C343,C370,C401,C409,C411,C425,C426,C431,C454,C462,C471,C474,C480,C481,C482,C483,C484,C485,C486,C492,C499,C504,C507,C511,C512,C513,C515,C526,C527,C544,C56,C581,C583,C592,C613,C666,C68,		1.128806	53	16160213.088941
11E9547630	Capacitor	C345		1.128806	1	704977644.692287
11E9547681	Capacitor	C165		1.128806	1	704977644.692287
11E9610080	Capacitor	C104,C108,C198,C209,C251,C257,C352,C353,C386,C438,C450,C452,C535,C588,C689		1.128806	15	55479656.844874
11E9610190	Capacitor	C161,C162,C163,C470,C472,C531,C532,C533		1.128806	8	101746760.035398

**File Name:** FWS-7350.rfp  
**Assembly:** 9697735004-D  
**Ref Des:**  
**Description:**

**Failure Rate:** 9146.251125  
**MTBF (hrs):** 109,334  
**Temperature:** 30  
**Environment:** GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
11E9622050	Capacitor	C1,C111,C176,C179,C355,C357,C358,C361,C362,C387,C4,C424,C466,C467,C607,C701,C702		1.128806	17	49133303.073811
11E9647060	Capacitor	C354,C356		1.128806	2	375289731.076049
11EA501050	Capacitor	C372,C373,C374,C375,C379,C388,C389,C390,C392,C393,C394,C397,C398,C399,C402,C404,C405,C406,C407,C408,C414,C417,C419,C429,C432,C433,C434,C439,C440,C441,C449,C455,C458,C459,C460,C461,C463,C464,C465,C475,C476,C477,C478,C479,C488,C493,C494,C496		1.128806	56	15308283.020186
11EA647010	Capacitor	C117,C119,C120,C365,C366,C367,C368,C369,C418,C420,C421,C423		1.128806	12	68856937.301178
121110156W	Inductor	L8,L9		4.944252	2	83201062.149749
1211101970	Inductor	L2		4.944252	1	154760964.143460

**File Name:** FWS-7350.rfp  
**Assembly:** 9697735004-D  
**Ref Des:**  
**Description:**

**Failure Rate:** 9146.251125  
**MTBF (hrs):** 109,334  
**Temperature:** 30  
**Environment:** GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1211103671	Inductor	L4		4.944252	1	154760964.143460
1211103675	Inductor	L5	27.4	7.960519	1	96121520.210264
1211110075	Inductor	L3		4.944252	1	154760964.143460
1211115070	Inductor	L7	26.2	7.809147	1	97984729.141631
1211122072	Inductor	L1		4.944252	1	154760964.143460
1212306030	Inductor	FB2,FB22,FB23,FB29,FB30,FB7		4.944252	6	30055900.223009
1212306033	Inductor	FB15,FB16,FB17,FB18,FB20,FB21,FB31,FB34		4.944252	8	22874049.098230
121230603I	Inductor	FB32,FB33		4.944252	2	83201062.149749
121230603S	Inductor	FB10,FB11,FB24,FB5, FB6		4.944252	5	35631881.582999
12123C0010	Inductor	FB19		4.944252	1	154760964.143460
1214309006	Inductor	L27,L28,L6		4.944252	3	57363284.375370
123131435J	Miscellaneous	Y3		19.200000	1	23844262.770939
123132505D	Miscellaneous	X1		19.200000	1	23844262.770939
123132505K	Miscellaneous	Y4		19.200000	1	23844262.770939
1231332726	Miscellaneous	Y2		19.200000	1	23844262.770939
1300414848	Semiconductor	D6		7.793411	1	92807310.010983
1301003440	Semiconductor	D7,D8		7.793411	2	50578095.223398
1301053040	Semiconductor	D1,D2,D3		7.793411	3	35106858.962001
1301400642	Semiconductor	D10,D4,D5,D9		7.793411	4	26989084.126235
1304400500	Optical Device	LED1		79.003355	1	6497172.749112
1305099140	Semiconductor	D11,D12		7.793411	2	50578095.223398
1305100541	Semiconductor	U11,U54,U55,U56, U57,U7		22.463360	6	6378891.324740
1310039040	Semiconductor	Q75		22.463360	1	31642600.748419
1310222211	Semiconductor	Q29,Q30,Q32,Q52,Q53,Q62		22.463360	6	6378891.324740
1310390413	Semiconductor	Q40,Q51		22.463360	2	17315095.066101
1311390612	Semiconductor	Q69		22.463360	1	31642600.748419
131411171J	Semiconductor	U39		22.463360	1	31642600.748419
1315034430	Semiconductor	Q5,Q68		22.463360	2	17315095.066101

**File Name:** FWS-7350.rfp  
**Assembly:** 9697735004-D  
**Ref Des:**  
**Description:**

**Failure Rate:** 9146.251125  
**MTBF (hrs):** 109,334  
**Temperature:** 30  
**Environment:** GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1315070020	Semiconductor	Q1,Q10,Q11, Q15,Q16, Q17,Q19,Q2, Q20,Q22, Q24,Q25,Q2 6,Q27, Q28,Q3,Q31, Q34,Q35, Q36,Q37,Q3 8,Q39,Q4, Q41,Q42,Q4 3,Q44, Q45,Q46,Q4 8,Q50, Q54,Q55,Q5 7,Q58, Q59,Q60,Q6 1,Q64, Q65,Q66,Q6 7,Q70, Q71,Q72,Q7 3,Q76, Q77,Q78,Q8, Q9		22.463360	52	811923.216110
1315190100	Semiconductor	U12,U27,U35 ,U53		22.463360	4	9270607.712006
1315200312	Semiconductor	Q18,Q21		22.463360	2	17315095.066101
1315230511	Semiconductor	Q23,Q33,Q4 7,Q49		22.463360	4	9270607.712006
1315450010	Semiconductor	Q63		22.463360	1	31642600.748419
1315703011	Semiconductor	Q7		22.463360	1	31642600.748419
1315720010	Semiconductor	Q14		22.463360	1	31642600.748419
1315S4C500	Semiconductor	Q12		22.463360	1	31642600.748419
1315S4C550	Semiconductor	Q13		22.463360	1	31642600.748419
1430012830	Integrated Circuit	U42,U48, U58		43.803003	3	4923240.069161
1430012830	Integrated Circuit	U23	25.2	227.231362	1	2262946.118147
1430012830	Integrated Circuit	U25	26	238.436011	1	2156605.147419
1430063320	Integrated Circuit	U17		43.803003	1	11739202.588727
1430304210	Integrated Circuit	U13		43.803003	1	11739202.588727
14304420B0	Integrated Circuit	U34		43.803003	1	11739202.588727
1430511990	Integrated Circuit	U5,U6		43.803003	2	6834791.244197
1430536310	Integrated Circuit	U2		43.803003	1	11739202.588727
14306132A0	Integrated Circuit	U8	24.9	223.153208	1	2304301.757528
14395372B0	Integrated Circuit	U1		43.803003	1	11739202.588727
143XL12310	Integrated Circuit	U29		43.803003	1	11739202.588727
1440003301	Integrated Circuit	U59		43.803003	1	11739202.588727
1440C27580	Integrated Circuit	U10	28	67.436981	1	7625079.311022
1440E15430	Integrated Circuit	U18		43.803003	1	11739202.588727
1463073500	Integrated Circuit	U44		43.803003	1	11739202.588727

**File Name:** FWS-7350.rfp  
**Assembly:** 9697735004-D  
**Ref Des:**  
**Description:**

**Failure Rate:** 9146.251125  
**MTBF (hrs):** 109,334  
**Temperature:** 30  
**Environment:** GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1482640HC0	Integrated Circuit	U41		43.803003	1	11739202.588727
14S2315700	Integrated Circuit	U46		43.803003	1	11739202.588727
14S2432600	Integrated Circuit	U15,U3		43.803003	2	6834791.244197
14S2750100	Integrated Circuit	U4		43.803003	1	11739202.588727
14S3003700	Integrated Circuit	TF1,TF2,TF3, TF4		43.803003	4	3879156.910661
14S4081102	Integrated Circuit	U24,U33,U9		43.803003	3	4923240.069161
14S4872800	Integrated Circuit	U20		43.803003	1	11739202.588727
14S5904501	Integrated Circuit	U16		26.018600	1	25551442.237972
14S5912300	Integrated Circuit	U32		26.018600	1	25551442.237972
14S5A00702	Integrated Circuit	U19		26.018600	1	25551442.237972
14S5A00821	Integrated Circuit	U14,U21,U26 ,U40, U50		26.018600	5	6292206.574138
14S5A01400	Integrated Circuit	U47,U49,U51 ,U52		26.018600	4	7696979.559193
14S5A23200	Integrated Circuit	U36	25.1	225.864594	1	2276639.820483
14S6206403	Integrated Circuit	U30		43.803003	1	11739202.588727
1540722085	Resistor	RP10,RP11,R P7,RP8, RP9		9.971436	5	14126297.426094
1540775082	Resistor	RP3,RP4,RP5 ,RP6		9.971436	4	17049357.262242
1540782080	Resistor	RP2		9.971436	1	51606907.671214
1540782280	Resistor	RP1		9.971436	1	51606907.671214
1601110201	Connection	SW1		16.184835	1	35685591.360212
16515C049A	Connection	DIMM1,DIM M3		16.184835	2	20390152.380746
16515C049B	Connection	DIMM2,DIM M4		16.184835	2	20390152.380746
165251220B	Connection	CN22,CN23,C N24, CN25		16.184835	4	11344857.509064
1653002100	Connection	CN1,CN15,C N2		16.184835	3	14515880.849373
1653003100	Connection	CMOS1		16.184835	1	35685591.360212
1653003101	Connection	JP1,JP2		16.184835	2	20390152.380746
165300420F	Connection	CN18		16.184835	1	35685591.360212
165300420L	Connection	CN16		16.184835	1	35685591.360212
1653212100	Connection	LPC1		16.184835	1	35685591.360212
1653212203	Connection	CN4		16.184835	1	35685591.360212
1653300101	Connection	CMOS1(1-2)		16.184835	1	35685591.360212
1653300102	Connection	JP1(1-2)		16.184835	1	35685591.360212
1653300107	Connection	JP2(2-3)		16.184835	1	35685591.360212
165392521H	Connection	CN17		16.184835	1	35685591.360212
1654205230	Connection	CN10		16.184835	1	35685591.360212
1654816300	Connection	CN20		16.184835	1	35685591.360212

**File Name:** FWS-7350.rfp  
**Assembly:** 9697735004-D  
**Ref Des:**  
**Description:**

**Failure Rate:** 9146.251125  
**MTBF (hrs):** 109,334  
**Temperature:** 30  
**Environment:** GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1654900701	Connection	SATA3G_1,S ATA3G_2, SATA3G_3,S ATA6G_1, SATA6G_2		16.184835	5	9343344.843761
1655004011	Connection	CN3,CN5,CN 7,CN8, CN9		16.184835	5	9343344.843761
1655004018	Connection	CPU_FAN1,S YS_FAN1, SYS_FAN2		16.184835	3	14515880.849373
1655424022	Connection	ATX1		16.184835	1	35685591.360212
1750113010	Miscellaneous	BT1		306.000000	1	1681683.006787
1750220323	Connection	BT1		16.184835	1	35685591.360212
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		9.488968	16	4949450.282821
1752002700	Miscellaneous	FS1		2.400000	1	254626042.602335
1812850290	Capacitor	R129		19.976775	1	30590649.213446