

# FWS-2350

## Reliability Prediction Report (MTBF)

Summary	Failure Rate: 11589.390527 ppm MTBF: 86,286 Hours
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Issue date	Approval	Test Engineer
2014/09/25	Tom Lin	Louie Lee

# Reliability Prediction (MTBF)

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**I . Model Name:** FWS-2350

**II . Prediction Date:** September. 25, 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-2350 (9697235004-D):

- Failure Rate: 11589.390527 ppm
- MTBF: 86,286 Hours

**AAEON Reliability Prediction  
Summary**

**File Name:** FWS-2350.rfp  
**Duty Cycle:** 100  
**Calculation Model:** Telcordia Issue 2  
**Method:** Method I Case 3

**Failure Rate:** 11589.390527  
**MTBF (hrs):** 86,286  
**Temperature:** 30  
**Environment:** GF, GU - Ground Fixed, Uncontrolled

Assembly Name	Part Number	Ref Des	Quantity	Failure Rate	MTBF
FWS-2350	9697235004-D		1	11589.390527	86,286

**File Name:** FWS-2350.rfp  
**Assembly:** 9697235004-D  
**Ref Des:**  
**Description:**

**Failure Rate:** 11589.390527  
**MTBF (hrs):** 86,286  
**Temperature:** 30  
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Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1050500104	Resistor	R115,R479,R679		2.547039	3	107020754.986850
1050501004	Resistor	R106,R163,R168, R169,R889,R894, R968,R993		2.547039	8	43225424.698300
1050501054	Resistor	R1011,R441,R446		2.547039	3	107020754.986850
1050502204	Resistor	R1003,R1005, R342, R829,R834,R838, R841,R971,R990		2.547039	9	38754445.632391
1050502224	Resistor	R1046,R164,R209, R214,R225,R302, R303,R327,R330, R381,R388,R419, R432,R433,R434, R444,R445,R449,R48, R58,R61,R639,R932, R977,R979,R995, R999		2.547039	27	13557741.157915
1050502234	Resistor	R283,R71		2.547039	2	154078778.388085
1050502724	Resistor	R207		2.547039	1	282340674.079668
1050503324	Resistor	R12,R13,R22, R317, R362		2.547039	5	67008142.102588
1050504324	Resistor	R122		2.547039	1	282340674.079668

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1050504724	Resistor	R1008,R1138, R1183, R1184,R1185, R200, R259,R261,R 275, R290,R291,R 292, R293,R294,R 295, R323,R347,R 363, R365,R366,R 370, R373,R374,R 384, R392,R393,R 422, R424,R450,R 458, R459,R477,R 640, R758,R760,R 761, R766,R781,R 836, R845,R854,R 856		2.547039	42	8834121.532637
1050505633	Resistor	R133		2.547039	1	282340674.079668
1050506224	Resistor	R29,R30,R35		2.547039	3	107020754.986850
1050507530	Resistor	R202,R83,R9 9		2.547039	3	107020754.986850
1050508224	Resistor	R1057,R1061, R135, R167,R213,R 217, R219,R221,R 230, R245,R254,R 269, R360,R406,R 442, R467,R967		2.547039	17	21160422.299251

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1050510034	Resistor	R128,R146,R148, R189,R231,R232, R268,R386,R416, R516,R689,R753, R769,R84,R893,R903, R922,R925		2.547039	18	20032117.836120
1050512104	Resistor	R1065		2.547039	1	282340674.079668
1050512724	Resistor	R389,R480		2.547039	2	154078778.388085
1050512734	Resistor	R562		2.547039	1	282340674.079668
1050515034	Resistor	R517		2.547039	1	282340674.079668
1050516204	Resistor	R904,R926		2.547039	2	154078778.388085
1050521024	Resistor	R774		2.547039	1	282340674.079668
1050522004	Resistor	R364		2.547039	1	282340674.079668
1050522034	Resistor	R435		2.547039	1	282340674.079668
1050523764	Resistor	R898,R908		2.547039	2	154078778.388085
1050524004	Resistor	R1013,R1015, R958		2.547039	3	107020754.986850
1050524314	Resistor	R179		2.547039	1	282340674.079668
1050525514	Resistor	R465		2.547039	1	282340674.079668
1050525524	Resistor	R210		2.547039	1	282340674.079668
1050526124	Resistor	R177,R246		2.547039	2	154078778.388085
1050527034	Resistor	R104		2.547039	1	282340674.079668
1050530124	Resistor	R972		2.547039	1	282340674.079668
1050530164	Resistor	R895,R900		2.547039	2	154078778.388085
1050532434	Resistor	R423		2.547039	1	282340674.079668
1050532464	Resistor	R1066		2.547039	1	282340674.079668
1050540204	Resistor	R931,R951		2.547039	2	154078778.388085
1050547004	Resistor	R1166,R1168, R430		2.547039	3	107020754.986850
1050549964	Resistor	R1017,R1018, R472, R485,R936		2.547039	5	67008142.102588
1050553614	Resistor	R257		2.547039	1	282340674.079668
1050556269	Resistor	R152,R301		2.547039	2	154078778.388085
1050557614	Resistor	R132		2.547039	1	282340674.079668
1050569814	Resistor	R947		2.547039	1	282340674.079668
1050580604	Resistor	R100		2.547039	1	282340674.079668
1050580614	Resistor	R141		2.547039	1	282340674.079668
1050586604	Resistor	R367		2.547039	1	282340674.079668
1050588724	Resistor	R276,R66		2.547039	2	154078778.388085
1050701504	Resistor	R247,R255,R263, R270,R382		2.547039	5	67008142.102588

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1050702704	Resistor	R1204,R1205, R404, R412,R427,R 439, R451,R455,R 475, R482,R491,R 492, R499,R501,R 506, R507,R508,R 509		2.547039	18	20032117.836120
1050703334	Resistor	R1088,R1089 ,R1090, R1091,R1104 ,R1105, R1106,R1107		2.547039	8	43225424.698300
1050708234	Resistor	R94		2.547039	1	282340674.079668
1050727009	Resistor	R965		2.547039	1	282340674.079668
1053500289	Resistor	R535		2.547039	1	282340674.079668
1053500489	Resistor	R160,R72		2.547039	2	154078778.388085
1059700001	Resistor	R1100,R1101 ,R1102, R1112,R1167 ,R447, R510,R588,R 621, R770,R771,R 772, R773,R929		2.547039	14	25477245.255648
105A500103	Resistor	R223,R308,R 76		2.547039	3	107020754.986850
105A500113	Resistor	R117		2.547039	1	282340674.079668
105A500133	Resistor	R934		2.547039	1	282340674.079668



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105A500139	Resistor	R1010,R1028, R1045, R1058,R111, R1157, R123,R124,R 125, R126,R127,R 139, R159,R178,R 196, R248,R334,R 335, R336,R343,R 356, R372,R376,R 403, R474,R779,R 819, R907,R910,R 911, R918,R942,R 943, R948,R989		2.547039	35	10545622.718268
105A500173	Resistor	R1041		2.547039	1	282340674.079668
105A500239	Resistor	R240		2.547039	1	282340674.079668
105A501003	Resistor	R67		2.547039	1	282340674.079668

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105A501039	Resistor	R1012,R102, R1024, R1025,R1029 ,R1030, R1032,R1040 ,R105, R1070,R1071 ,R1073, R1074,R1075 ,R1079, R1080,R1087 ,R1132, R1135,R1136 ,R1193, R121,R149,R 151, R175,R188,R 201, R226,R235,R 238, R262,R280,R 281, R324,R331,R 332, R333,R339,R 348, R358,R377,R 394, R401,R402,R 4		2.547039	145	2625491.110505
105A501233	Resistor	R830		2.547039	1	282340674.079668
105A501323	Resistor	R1165		2.547039	1	282340674.079668
105A501539	Resistor	R23,R27,R28 ,R960		2.547039	4	82309758.689546
105A502039	Resistor	R203,R525,R 553,R80, R81,R944,R9 45		2.547039	7	48991237.965885
105A503039	Resistor	R249,R514,R 91		2.547039	3	107020754.986850
105A503309	Resistor	R498,R759,R 821, R906,R919		2.547039	5	67008142.102588
105A505109	Resistor	R1000,R1001 ,R1002, R1004,R1006 ,R1037, R1056,R1203 ,R315, R316,R953,R 973, R988		2.547039	13	27342571.921361
105A505123	Resistor	R97		2.547039	1	282340674.079668

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105A505923	Resistor	R1027		2.547039	1	282340674.079668
105A506829	Resistor	R229,R233		2.547039	2	154078778.388085
105A506834	Resistor	R915		2.547039	1	282340674.079668
105A507533	Resistor	R120		2.547039	1	282340674.079668
105A510009	Resistor	R129,R130,R155, R156,R26,R311,R34, R41,R45,R49,R55, R56,R77,R79,R827, R828,R858,R869, R885,R891,R912, R913		2.547039	22	16518584.576317
105A513323	Resistor	R539		2.547039	1	282340674.079668
105A515009	Resistor	R1175,R1176,R170, R174		2.547039	4	82309758.689546
105A515034	Resistor	R85		2.547039	1	282340674.079668
105A515813	Resistor	R143		2.547039	1	282340674.079668
105A520533	Resistor	R92,R95		2.547039	2	154078778.388085
105A522133	Resistor	R1036		2.547039	1	282340674.079668
105A523723	Resistor	R396		2.547039	1	282340674.079668
105A530113	Resistor	R1042		2.547039	1	282340674.079668
105A530123	Resistor	R379		2.547039	1	282340674.079668
105A534823	Resistor	R142		2.547039	1	282340674.079668
105A547513	Resistor	R1039		2.547039	1	282340674.079668
105A548723	Resistor	R137		2.547039	1	282340674.079668
105A548733	Resistor	R96		2.547039	1	282340674.079668
105A549919	Resistor	R487,R757,R762, R763,R764		2.547039	5	67008142.102588
105A551119	Resistor	R180,R187		2.547039	2	154078778.388085
105A568103	Resistor	R949		2.547039	1	282340674.079668
105A573223	Resistor	R314		2.547039	1	282340674.079668
105A590900	Resistor	R185		2.547039	1	282340674.079668
105A595323	Resistor	R975		2.547039	1	282340674.079668

**Reliability Prediction  
Summary**

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**Assembly:** 9697235004-D  
**Ref Des:**  
**Description:**

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**MTBF (hrs):** 86,286  
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Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
105A700003	Resistor	R1093,R1095, R1096, R1097,R110, R1113, R1116,R1130, R1131, R1133,R1137, R1139, R136,R138,R147, R158,R171,R216, R224,R239,R242, R250,R267,R296, R298,R310,R318, R319,R399,R408, R411,R436,R470, R471,R478,R481,R50, R545,R638,R73,R916, R946,R952,R98,R986, R987,R99		2.547039	47	7918121.839508

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105A700009	Resistor	R1009,R101, R1026, R1044,R1049 ,R1052, R1053,R1059 ,R1060, R1063,R1072 ,R1081, R1082,R109, R1117, R112,R1121, R114, R1140,R1158 ,R1170, R1173,R1174 ,R1177, R1179,R1189 ,R1190, R1191,R1194 ,R1196, R134,R144,R 145, R153,R165,R 176, R198,R199,R 208, R211,R228,R 234, R236,		2.547039	156	2443022.396642
105A70000A	Resistor	R1020,R1033 ,R543, R547,R550,R 551		2.547039	6	56573956.677649
105A700139	Resistor	R309		2.547039	1	282340674.079668
105A700203	Resistor	R251,R284,R 963		2.547039	3	107020754.986850
105A701003	Resistor	R118		2.547039	1	282340674.079668
105A701009	Resistor	R197		2.547039	1	282340674.079668
105A701039	Resistor	R1069,R1076 ,R1078, R256,R299		2.547039	5	67008142.102588
105A701053	Resistor	R831		2.547039	1	282340674.079668
105A701069	Resistor	R161,R338		2.547039	2	154078778.388085
105A701529	Resistor	R266		2.547039	1	282340674.079668
105A702039	Resistor	R227		2.547039	1	282340674.079668
105A702263	Resistor	R173,R357,R 380, R395,R398,R 429, R431,R488		2.547039	8	43225424.698300
105A702269	Resistor	R172,R88		2.547039	2	154078778.388085

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105A703309	Resistor	R574,R576,R577, R578,R592,R595, R599,R600,R619, R622,R626,R629, R632,R634,R635, R637		2.547039	16	22425139.809646
105A703329	Resistor	R1108,R1109,R1110, R1111,R1122,R1123, R1124,R1125,R1126, R1127,R1128,R1129, R603,R604,R605, R606,R607,R608, R609,R610,R611, R612,R613,R614		2.547039	24	15190138.820515
105A703909	Resistor	R375		2.547039	1	282340674.079668
105A704729	Resistor	R1068,R1077,R1098, R1114,R215,R272, R273,R297,R383, R438,R593,R768		2.547039	12	29507083.749401
105A705129	Resistor	R59,R60,R62,R63, R64,R65		2.547039	6	56573956.677649
105A708209	Resistor	R832,R835,R843		2.547039	3	107020754.986850
105A710009	Resistor	R166,R181,R182, R183,R190,R191, R192,R195,R220, R287,R288		2.547039	11	32049696.385471
105A710039	Resistor	R218,R44		2.547039	2	154078778.388085

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105A715009	Resistor	R1,R10,R107 ,R11, R14,R15,R16 ,R17, R18,R19,R2, R20,R21, R24,R25,R36 ,R38, R39,R4,R40, R5,R6, R69,R7,R70, R775, R778,R8,R85 7,R884, R886,R892,R 9		2.547039	33	11164784.962504
105A716533	Resistor	R119,R186		2.547039	2	154078778.388085
105A733003	Resistor	R855,R859		2.547039	2	154078778.388085
105A733009	Resistor	R1141,R1142 ,R1143, R1144,R1145 ,R1146, R1147,R1148 ,R1149, R1150,R1151 ,R1152, R1153,R1154 ,R1155, R1156,R337, R526, R528,R530,R 532, R556,R557,R 563, R565,R705,R 711, R712,R749,R 984		2.547039	30	12244464.256771
105A747009	Resistor	R862		2.547039	1	282340674.079668
105A756039	Resistor	R103		2.547039	1	282340674.079668
105A768009	Resistor	R140		2.547039	1	282340674.079668
106B510034	Resistor	RT2,RT3		7.724580	2	38596617.434771
106BA01033	Resistor	R954,R964		2.547039	2	154078778.388085
106BA22034	Resistor	RT1,RT4		7.724580	2	38596617.434771
1121415090	Capacitor	C602,C94		1.128806	2	375289731.076049
1121501680	Capacitor	C187,C332,C 362,C46, C72,C92		1.128806	6	133979725.056342

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1121501690	Capacitor	C153,C214,C258, C267,C364,C366, C370,C427,C428, C438,C443,C449, C450,C472,C543, C671,C672,C678, C697,C701,C717, C747,C749,C758, C826		1.128806	25	33748887.792763
1121501691	Capacitor	C99		1.128806	1	704977644.692287
1121533480	Capacitor	C126		1.128806	1	704977644.692287
1121747890	Capacitor	C63		1.128806	1	704977644.692287
1122501780	Capacitor	C186		1.128806	1	704977644.692287
1122522890	Capacitor	C429,C731,C769		1.128806	3	257514172.353070
1124418090	Capacitor	C225,C237		1.128806	2	375289731.076049
1124418190	Capacitor	C106,C113,C119, C123,C163,C168, C171,C178,C182, C189,C193,C198, C748,C776,C777, C778,C779,C780, C781,C830		1.128806	20	41950408.034165
1124420090	Capacitor	C292,C322		1.128806	2	375289731.076049
1124427090	Capacitor	C277		1.128806	1	704977644.692287
1124427091	Capacitor	C409,C410,C419, C420,C422,C434, C435,C436		1.128806	8	101746760.035398
1124433090	Capacitor	C87		1.128806	1	704977644.692287
1124433190	Capacitor	C58,C88		1.128806	2	375289731.076049
1124522280	Capacitor	C141,C206,C43		1.128806	3	257514172.353070
1124522290	Capacitor	C33		1.128806	1	704977644.692287
1124522680	Capacitor	C191,C196		1.128806	2	375289731.076049
1124533190	Capacitor	C334,C367		1.128806	2	375289731.076049
1124533191	Capacitor	C242,C705		1.128806	2	375289731.076049



**File Name:** FWS-2350.rfp  
**Assembly:** 9697235004-D  
**Ref Des:**  
**Description:**

**Failure Rate:** 11589.390527  
**MTBF (hrs):** 86,286  
**Temperature:** 30  
**Environment:** GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1124533280	Capacitor	C1,C194,C2, C22,C6, C67		1.128806	6	133979725.056342
1124547190	Capacitor	C108		1.128806	1	704977644.692287
1129522790	Capacitor	C311,C317,C 323, C729		1.128806	4	196873384.410843
1129610080	Capacitor	C10,C18,C19 ,C195, C204,C234,C 235, C250,C256,C 266,C27, C28,C29,C29 1,C3, C30,C31,C31 0,C32, C330,C341,C 376,C4, C452,C456,C 457, C469,C475,C 480, C481,C503,C 547, C566,C639,C 644, C658,C665,C 693, C709,C9		1.128806	40	21305452.824644
1129610260	Capacitor	C754,C755,C 756, C757		1.128806	4	196873384.410843
1129701790	Capacitor	C273,C382,C 713		1.128806	3	257514172.353070
1129710090	Capacitor	C82		1.128806	1	704977644.692287
1129710091	Capacitor	C145,C96		1.128806	2	375289731.076049
1129710390	Capacitor	C630,C648,C 649,C80, C89,C90		1.128806	6	133979725.056342
1129722091	Capacitor	C289,C290,C 465, C466		1.128806	4	196873384.410843
1181627197	Capacitor	C36		4.744484	1	159663026.715137
1181647112	Capacitor	C308		4.744484	1	159663026.715137
1189610153	Capacitor	C165,C272,C 274, C328,C460,C 565, C629,C730,C 846, C847		4.744484	10	19193879.126421
1189633151	Capacitor	C505,C524,C 76,C81		4.744484	4	45505862.704531
1189647187	Capacitor	C483,C486,C 492		4.744484	3	59399119.141203

**File Name:** FWS-2350.rfp  
**Assembly:** 9697235004-D  
**Ref Des:**  
**Description:**

**Failure Rate:** 11589.390527  
**MTBF (hrs):** 86,286  
**Temperature:** 30  
**Environment:** GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1189656196	Capacitor	C336,C372,C439		4.744484	3	59399119.141203
118A656190	Capacitor	C315,C371		4.744484	2	86049450.747498
118C682190	Capacitor	C127,C128,C226		4.744484	3	59399119.141203
11A2410240	Capacitor	C217,C319		1.128806	2	375289731.076049
11A4410180	Capacitor	C97		1.128806	1	704977644.692287
11A4418280	Capacitor	C670		1.128806	1	704977644.692287
11A4430090	Capacitor	C205,C26		1.128806	2	375289731.076049
11C1510390	Capacitor	C148,C283,C284,C285,C286,C610,C664,C667,C676,C704		1.128806	10	82101057.548118
11C1533890	Capacitor	C645		1.128806	1	704977644.692287
11C1539840	Capacitor	C385,C386,C387,C389		1.128806	4	196873384.410843
11C1610090	Capacitor	C110,C181,C98		1.128806	3	257514172.353070
11C2410390	Capacitor	C114		1.128806	1	704977644.692287
11C2610030	Capacitor	C34		1.128806	1	704977644.692287
11C4501380	Capacitor	C48,C74		1.128806	2	375289731.076049

**File Name:** FWS-2350.rfp  
**Assembly:** 9697235004-D  
**Ref Des:**  
**Description:**

**Failure Rate:** 11589.390527  
**MTBF (hrs):** 86,286  
**Temperature:** 30  
**Environment:** GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
11C4501790	Capacitor	C104,C105,C131, C132,C134,C149, C150,C173,C174, C192,C200,C215, C216,C222,C227, C228,C229,C236, C265,C276,C278, C279,C280,C37,C38, C39,C40,C453,C454, C461,C464,C555, C564,C570,C580, C583,C585,C592, C600,C607,C615,C68, C69,C696,C83,C84, C85,C86		1.128806	48	17813540.224875
11C4512290	Capacitor	C101		1.128806	1	704977644.692287
11C4522290	Capacitor	C117,C342,C407, C431,C635		1.128806	5	159367490.199266
11C4533380	Capacitor	C576,C642,C682		1.128806	3	257514172.353070
11C4582190	Capacitor	C60		1.128806	1	704977644.692287

**File Name:** FWS-2350.rfp  
**Assembly:** 9697235004-D  
**Ref Des:**  
**Description:**

**Failure Rate:** 11589.390527  
**MTBF (hrs):** 86,286  
**Temperature:** 30  
**Environment:** GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
11C9510490	Capacitor	C172,C210,C211, C212,C213,C238, C239,C349,C350, C394,C395,C398, C399,C609,C617, C623,C628,C636, C637,C638,C662, C663,C666,C668, C669,C675,C677, C679,C680,C683, C694,C695		1.128806	32	26512863.286539
11E1510050	Capacitor	C251,C252,C270, C275,C287,C296, C320,C321,C368,C44, C45		1.128806	11	74892583.279796
11E1522060	Capacitor	C35,C41,C42,C54, C61,C65		1.128806	6	133979725.056342
11E1522680	Capacitor	C255,C402,C535, C573,C596,C640, C646,C745,C759		1.128806	9	90863428.080946
11E2501030	Capacitor	C75		1.128806	1	704977644.692287

**File Name:** FWS-2350.rfp  
**Assembly:** 9697235004-D  
**Ref Des:**  
**Description:**

**Failure Rate:** 11589.390527  
**MTBF (hrs):** 86,286  
**Temperature:** 30  
**Environment:** GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
11E2501690	Capacitor	C103,C109,C111, C112,C118,C129, C133,C136,C139,C14, C140,C142,C143, C147,C161,C164, C166,C170,C176, C177,C188,C20,C203, C219,C220,C221, C223,C224,C230, C231,C232,C233, C240,C243,C244, C249,C254,C260, C263,C264,C269, C281,C282,C288, C294,C295,C298, C299,C3		1.128806	222	3924677.766200
11E2510060	Capacitor	C651,C653,C654, C655,C656,C657		1.128806	6	133979725.056342
11E4433090	Capacitor	C185,C259,C313, C327,C605		1.128806	5	159367490.199266
11E9501080	Capacitor	C120,C121		1.128806	2	375289731.076049
11E9501090	Capacitor	C378,C379,C380, C381		1.128806	4	196873384.410843

**File Name:** FWS-2350.rfp  
**Assembly:** 9697235004-D  
**Ref Des:**  
**Description:**

**Failure Rate:** 11589.390527  
**MTBF (hrs):** 86,286  
**Temperature:** 30  
**Environment:** GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
11E9501091	Capacitor	C115,C116,C155, C162,C167,C169, C175,C208,C209,C21, C23,C246,C247,C253, C262,C293,C375, C432,C468,C479, C487,C498,C499,C5, C500,C515,C522, C525,C526,C527, C531,C532,C533, C536,C538,C540, C548,C549,C563,C57, C577,C586,C587, C599,C608,C611, C622,C624,C643,C		1.128806	56	15308283.020186
11E9510050	Capacitor	C458		1.128806	1	704977644.692287
11E9522490	Capacitor	C346		1.128806	1	704977644.692287
11E9547630	Capacitor	C124		1.128806	1	704977644.692287
11E9547681	Capacitor	C184		1.128806	1	704977644.692287

**File Name:** FWS-2350.rfp  
**Assembly:** 9697235004-D  
**Ref Des:**  
**Description:**

**Failure Rate:** 11589.390527  
**MTBF (hrs):** 86,286  
**Temperature:** 30  
**Environment:** GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
11E9610080	Capacitor	C100,C137,C144, C152,C202,C248, C297,C369,C406, C437,C444,C445, C518,C542,C626, C689,C692,C71,C711, C727,C744,C752, C770,C794,C795, C797,C799,C802, C803,C804,C805, C811,C814,C815, C816,C817,C823, C827,C828,C829		1.128806	40	21305452.824644
11E9610190	Capacitor	C107,C122,C138,C52, C53,C551,C575,C595		1.128806	8	101746760.035398
11E9622050	Capacitor	C15,C157,C16,C17, C179,C180,C305,C49, C494,C497,C50,C51, C539,C659,C660, C673,C674		1.128806	17	49133303.073811
11E9622080	Capacitor	C241,C423,C424, C425,C426		1.128806	5	159367490.199266
11E9647060	Capacitor	C345,C59,C91		1.128806	3	257514172.353070

**File Name:** FWS-2350.rfp  
**Assembly:** 9697235004-D  
**Ref Des:**  
**Description:**

**Failure Rate:** 11589.390527  
**MTBF (hrs):** 86,286  
**Temperature:** 30  
**Environment:** GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
11EA501050	Capacitor	C488,C489,C490, C491,C493,C495, C504,C506,C507, C508,C510,C511, C512,C513,C514, C517,C519,C520, C521,C528,C530, C534,C541,C544, C545,C546,C552, C554,C556,C557, C558,C559,C561, C562,C567,C568, C569,C571,C572, C574,C579,C581, C582,C584,C588, C589,C591,C593,		1.128806	56	15308283.020186
11EA647010	Capacitor	C158,C159,C160, C578,C590,C603, C604,C614,C618, C625,C627,C650		1.128806	12	68856937.301178
121110156W	Inductor	L1,L7		4.944252	2	83201062.149749
1211101970	Inductor	L2	25.7	7.746608	1	98775772.068419
1211102269	Inductor	L30,L31		4.944252	2	83201062.149749
1211103671	Inductor	L5	24.2	7.560864	1	101202345.380924
1211103675	Inductor	L6	25.6	7.734137	1	98935035.860197
1211115070	Inductor	L4		4.944252	1	154760964.143460
1211122072	Inductor	L9		4.944252	1	154760964.143460
1211133076	Inductor	L10		4.944252	1	154760964.143460
121114707A	Inductor	L13		4.944252	1	154760964.143460
1212306030	Inductor	FB14,FB15,F B24,FB3, FB30,FB37		4.944252	6	30055900.223009



**File Name:** FWS-2350.rfp  
**Assembly:** 9697235004-D  
**Ref Des:**  
**Description:**

**Failure Rate:** 11589.390527  
**MTBF (hrs):** 86,286  
**Temperature:** 30  
**Environment:** GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1212306033	Inductor	FB27,FB31,F B32, FB33,FB34,F B35, FB36,FB38		4.944252	8	22874049.098230
1212306031	Inductor	FB25,FB28		4.944252	2	83201062.149749
1212306035	Inductor	FB10,FB12,F B5,FB7, FB8		4.944252	5	35631881.582999
12123A0009	Inductor	FB1,FB2,FB4 3,FB6, FB9		4.944252	5	35631881.582999
1214309006	Inductor	L11,L12,L3		4.944252	3	57363284.375370
12310025A3	Miscellaneous	X1,Y4,Y7,Y8		19.200000	4	4388233.395340
123131435J	Miscellaneous	Y3		19.200000	1	23844262.770939
1231332726	Miscellaneous	Y2		19.200000	1	23844262.770939
1252NS8920	Inductor	TF1,TF2,TF3, TF4		4.944252	4	43912872.424775
1300414844	Semiconductor	D1		7.793411	1	92807310.010983
1301005440	Semiconductor	D2		7.793411	1	92807310.010983
1301053040	Semiconductor	D4,D5,D6		7.793411	3	35106858.962001
1301400642	Semiconductor	D10,D11,D3, D9		7.793411	4	26989084.126235
1304100250	Optical Device	LED1,LED3		79.003355	2	3783722.582110
1304400150	Optical Device	LED2		79.003355	1	6497172.749112
1304451450	Optical Device	LED10,LED1 1,LED4, LED5,LED6,L ED7, LED8,LED9		79.003355	8	1187843.959925
1305099140	Semiconductor	D7,D8		7.793411	2	50578095.223398
1305100541	Semiconductor	U2,U48,U49, U50,U51, U9		22.463360	6	6378891.324740
1310039040	Semiconductor	Q74		22.463360	1	31642600.748419
1310222211	Semiconductor	Q31,Q55,Q7 5,Q76, Q80,Q82		22.463360	6	6378891.324740
1310390413	Semiconductor	Q30,Q69		22.463360	2	17315095.066101
1311390612	Semiconductor	Q72		22.463360	1	31642600.748419
1314111719	Semiconductor	Q73		22.463360	1	31642600.748419
131411171J	Semiconductor	U65		22.463360	1	31642600.748419
1315034430	Semiconductor	Q54		22.463360	1	31642600.748419

**File Name:** FWS-2350.rfp  
**Assembly:** 9697235004-D  
**Ref Des:**  
**Description:**

**Failure Rate:** 11589.390527  
**MTBF (hrs):** 86,286  
**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,Q2,Q26,Q3,Q32,Q35,Q36,Q37,Q38,Q4,Q41,Q42,Q43,Q44,Q45,Q46,Q47,Q49,Q5,Q50,Q53,Q56,Q57,Q58,Q59,Q6,Q61,Q62,Q64,Q65,Q7,Q77,Q78,Q79,Q8,Q81,Q86,Q87,Q89,Q9,Q90,Q91,Q95,Q96,Q98		22.463360	46	914842.120474
1315190100	Semiconductor	U36,U38,U41,U61		22.463360	4	9270607.712006
1315200312	Semiconductor	Q25,Q40		22.463360	2	17315095.066101
1315230511	Semiconductor	Q60,Q63,Q94,Q97		22.463360	4	9270607.712006
1315413410	Semiconductor	Q66,Q67		22.463360	2	17315095.066101
1315443512	Semiconductor	Q51		22.463360	1	31642600.748419
1315700216	Semiconductor	Q11,Q12,Q13,Q14,Q15,Q16,Q17,Q18,Q20,Q21,Q23,Q24,Q27,Q28,Q29,Q34,Q48,Q70,Q71,Q83,Q84,Q85,Q92,Q93		22.463360	24	1717346.784324
1315720010	Semiconductor	Q39,Q68		22.463360	2	17315095.066101
1315762010	Semiconductor	Q52		22.463360	1	31642600.748419
1315S4C500	Semiconductor	Q33		22.463360	1	31642600.748419
1315S4C550	Semiconductor	Q19		22.463360	1	31642600.748419
1430012830	Integrated Circuit	U15,U25,U37,U64		43.803003	4	3879156.910661
1430012830	Integrated Circuit	U28	27.9	267.062402	1	1925438.868022
1430063320	Integrated Circuit	U13		43.803003	1	11739202.588727
1430304210	Integrated Circuit	U11		43.803003	1	11739202.588727
14304420B0	Integrated Circuit	U26		43.803003	1	11739202.588727
1430511990	Integrated Circuit	U3,U5		43.803003	2	6834791.244197
1430536310	Integrated Circuit	U6		43.803003	1	11739202.588727

**File Name:** FWS-2350.rfp  
**Assembly:** 9697235004-D  
**Ref Des:**  
**Description:**

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**Temperature:** 30  
**Environment:** GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
14306132A0	Integrated Circuit	U8		43.803003	1	11739202.588727
14395372B0	Integrated Circuit	U4		43.803003	1	11739202.588727
143XL12310	Integrated Circuit	U32		43.803003	1	11739202.588727
1440002130	Integrated Circuit	U63,U70		43.803003	2	6834791.244197
1440003301	Integrated Circuit	U56		43.803003	1	11739202.588727
1440211AT0	Integrated Circuit	U42,U43		43.803003	2	6834791.244197
1440C25580	Integrated Circuit	U10	38.3	97.650156	1	5265862.867603
1440E15430	Integrated Circuit	U29	29.8	298.738646	1	1721278.235515
1463073500	Integrated Circuit	U19		11.063278	1	58231413.220643
1482640HC0	Integrated Circuit	U72		43.803003	1	11739202.588727
1490086050	Integrated Circuit	U18	38.1	480.376093	1	1070436.970446
14S2315700	Integrated Circuit	U7		43.803003	1	11739202.588727
14S2432600	Integrated Circuit	U1,U16		43.803003	2	6834791.244197
14S3112300	Integrated Circuit	U39		43.803003	1	11739202.588727
14S4081102	Integrated Circuit	U20,U47,U71		43.803003	3	4923240.069161
14S4872800	Integrated Circuit	U12		43.803003	1	11739202.588727
14S5904501	Integrated Circuit	U62		26.018600	1	25551442.237972
14S5912300	Integrated Circuit	U52		26.018600	1	25551442.237972
14S5A00702	Integrated Circuit	U22		26.018600	1	25551442.237972
14S5A00821	Integrated Circuit	U21,U30,U35,U60		26.018600	4	7696979.559193
14S5A01400	Integrated Circuit	U46,U53,U58,U59		26.018600	4	7696979.559193
14S6206403	Integrated Circuit	U24		11.063278	1	58231413.220643
14S6312802	Integrated Circuit			11.063278	1	58231413.220643
1540722085	Resistor	RP1,RP2,RP3,RP4,RP5		9.971436	5	14126297.426094
1540775082	Resistor	RP10,RP11,RP8,RP9		9.971436	4	17049357.262242
1540782080	Resistor	RP6		9.971436	1	51606907.671214
1540782280	Resistor	RP7		9.971436	1	51606907.671214
160102US90	Connection	SW1		16.184835	1	35685591.360212
1601615600	Connection	SW2		16.184835	1	35685591.360212
16515C049A	Connection	DIMM1,DIMM2		16.184835	2	20390152.380746
1652503209	Connection	CN18		16.184835	1	35685591.360212
1652510206	Connection	LAN5,LAN6		16.184835	2	20390152.380746
165251220H	Connection	CON1,LAN1,LAN2,LAN3,LAN4		16.184835	5	9343344.843761
1653003100	Connection	CMOS1		16.184835	1	35685591.360212
1653003101	Connection	JP1,JP2		16.184835	2	20390152.380746
165300420L	Connection	CN14		16.184835	1	35685591.360212
1653005207	Connection	CN5		16.184835	1	35685591.360212
1653008100	Connection	CN19		16.184835	1	35685591.360212
1653212100	Connection	LPC1		16.184835	1	35685591.360212
1653300101	Connection	CMOS1(1-2)		16.184835	1	35685591.360212

**File Name:** FWS-2350.rfp  
**Assembly:** 9697235004-D  
**Ref Des:**  
**Description:**

**Failure Rate:** 11589.390527  
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**Temperature:** 30  
**Environment:** GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1653300102	Connection	JP1(2-3)		16.184835	1	35685591.360212
1653300107	Connection	JP2(1-2)		16.184835	1	35685591.360212
165392521H	Connection	CN3		16.184835	1	35685591.360212
1654226303	Connection	CN13		16.184835	1	35685591.360212
1654808309	Connection	USB2		16.184835	1	35685591.360212
1654900701	Connection	SATA6G_1		16.184835	1	35685591.360212
1655004011	Connection	CN9		16.184835	1	35685591.360212
1655004018	Connection	SYS_FAN1		16.184835	1	35685591.360212
1750113010	Miscellaneous	BT1		306.000000	1	1681683.006787
1750220326	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		19.477355	16	2689762.931351
1752002700	Miscellaneous	FS1		2.400000	1	254626042.602335