

# FWS-2200

## Reliability Prediction Report

### (MTBF)

Summary	Failure Rate: 22.279395 ppm MTBF: 44,885 Hours
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Issue date	Approval	Test Engineer
2012/06/14	Vincent Chen	Jessica Chou

# Reliability Prediction (MTBF)

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**I . Model Name:** TF-FWS-2200-E6-A10-A10-00

**II . Prediction Date:** Jun. 14, 2012

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

**IV . Predicted by:** Jessica Chou

**V . Equipment:** Relex Ver.7.3 Visual Reliability Software

## **VI. Simulation Environment:**

- Temperature: 24.9 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 multiplier is 1,000,000.
- MTBF : MTBF is always specified in hours.

### VIII. Prediction Result:

TF-FWS-2200-E6-A10-A10-00 (Not include FAN and power Adapter):

- Failure Rate: 22.279395ppm
- MTBF: 44,885 (hour)

Below components value were provided by the suppliers:

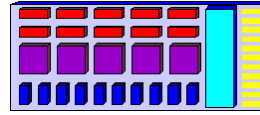
(TF)PowerAdapter.100/240V.12V.5A.60W.DC.W/ Lock.FSP.FSP060-DBAE1/9NA0603125

MTBF: The subject adapter have a minimum predicted MTBF of 100,000 hours of continuous operation at 25°C, maximum-output load, and nominal AC input voltage.

(TF)Fan.12V.40\*40\*10mm.Cable L=170mm.SUNON.HA40101V4-D030-C99.For FWS-2200  
LIFE EXPECTANCY: 60,000 Hours at 40 deg. C, 65% humidity, 90% CL

### AAEON Reliability Prediction Report

**Part Number**  
**Reference Des**  
**Date** 06. 14, 2012  
**Environment** GF, GU - Ground Fixed, Uncontrolled  
**Temp. (°C)** 24.90



**Description** Top-level assembly  
**File Name** FWS-2200.RPJ  
**Time** 11:30  
**Failure Rate** 22.279395  
**MTBF** 44,885

Assembly Name	Part Number	Model	Method	Environment	Duty Cycle	Qty	Failure Rate	MTBF
TF-FWS-2200E6-A10-A10--00		Telcordia Issue 1	Method I Case 3	GF, GU - Ground Fixed, Uncontrolled	100.00	1.00	22.28	44884.52
FWB-2200	9697220032-D	Telcordia Issue 1	Method I Case 3	GF, GU - Ground Fixed, Uncontrolled	100.00	1.00	22.28	44884.52

**AAEON Reliability Prediction Report**

**Part Number** 9697220032-D  
**Reference Des**  
**Date** 06. 14, 2012  
**Environment** GF, GU - Ground Fixed, Uncontrolled  
**Temp. (°C)** 24.90



**Description**  
**File Name** FWS-2200.RPJ  
**Time** 11:30  
**Failure Rate** 22.279395  
**MTBF** 44,885

Part Number	Category	Location	Calculation Model	Quality	Tem. Rise	Quantity	Failure Rate, Unit	Failure Rate,%	MTBF, Unit
11G233110412150	Capacitor	BC18,BC185,BC186, BC19,BC20,BC245, BC246,BC249,BC266, BC267,BC268,BC290, BC291,BC292,BC293, BC294,BC295,BC3, BC308,BC309,BC310, BC311,BC313,BC315, BC316,BC317,BC334, BC336,BC341,BC346, BC348,BC350,BC351, BC352,BC353,BC354, BC355,BC356,BC4	Telcordia Issue 1	Level I		47.00	0.004527	.9549	220919666.10
12G04800008B	Connection	U15	Telcordia Issue 1	Level I		1.00	0.001132	.0051	883385841.65
165392521H	Connection	CFD1	Telcordia Issue 1	Level I		1.00	0.028300	.1270	35335433.67
1214309006	Inductor	CH25,CH26,CH27, CH28	Telcordia Issue 1	Level I		4.00	0.002263	.0406	441839332.19
1655907130	Connection	CN13	Telcordia Issue 1	Level I		1.00	0.001132	.0051	883385841.65
1174510180	Capacitor	CP1,CP2,CP3,CP4	Telcordia Issue 1	Level I		4.00	0.005462	.0981	183081288.02
1174547080	Capacitor	CP5	Telcordia Issue 1	Level I		1.00	0.005462	.0245	183081288.02
11G233222511150	Capacitor	C1,C136,C137,C138, C186,C217,C221, C228,C236,C243, C245,C246,C248, C252,C253,C35,C37	Telcordia Issue 1	Level I		17.00	0.004527	.3454	220919666.10
1124427090	Capacitor	C16,C18,C184,C187, C191,C21,C22,C64, C69,C70,C71,C72, C73,C74,C75	Telcordia Issue 1	Level I		15.00	0.004527	.3048	220919666.10
1189633181	Capacitor	C182,C26	Telcordia Issue 1	Level I		2.00	0.004527	.0406	220919666.10
1129710390	Capacitor	C141,C142,C143, C144,C157,C158, C159,C160,C161, C162,C163,C164, C189,C28,C31,C61, C93,C94	Telcordia Issue 1	Level I		18.00	0.004527	.3657	220919666.10
11C4568190	Capacitor	C29,C33	Telcordia Issue 1	Level I		2.00	0.004527	.0406	220919666.10
11E2501080	Capacitor	C188,C46,C50,C58, C59,C60	Telcordia Issue 1	Level I		6.00	0.004527	.1219	220919666.10
11G235222625320	Capacitor	C101,C109,C198, C203,C244,C77,C79, C82,C88,C90	Telcordia Issue 1	Level I		10.00	0.004527	.2032	220919666.10
1129622690	Capacitor	C105,C124,C202, C216,C84	Telcordia Issue 1	Level I		5.00	0.004527	.1016	220919666.10
1124582180	Capacitor	C91	Telcordia Issue 1	Level I		1.00	0.004527	.0203	220919666.10
1124533280	Capacitor	C92	Telcordia Issue 1	Level I		1.00	0.004527	.0203	220919666.10

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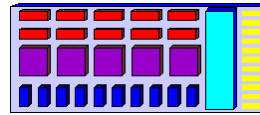


**Description**  
**File Name** FWS-2200.RPJ  
**Time** 11:30  
**Failure Rate** 22.279395  
**MTBF** 44,885

Part Number	Category	Location	Calculation Model	Quality	Tem. Rise	Quantity	Failure Rate, Unit	Failure Rate,%	MTBF, Unit
1124433190	Capacitor	C98	Telcordia Issue 1	Level I		1.00	0.004527	.0203	220919666.10
1124522680	Capacitor	C99	Telcordia Issue 1	Level I		1.00	0.004527	.0203	220919666.10
1124522190	Capacitor	C103	Telcordia Issue 1	Level I		1.00	0.004527	.0203	220919666.10
1124433090	Capacitor	C122,C125,C134, C135	Telcordia Issue 1	Level I		4.00	0.004527	.0813	220919666.10
11G233110516070	Capacitor	C128,C254,C255	Telcordia Issue 1	Level I		3.00	0.004527	.0610	220919666.10
1124547190	Capacitor	C185	Telcordia Issue 1	Level I		1.00	0.004527	.0203	220919666.10
1124522280	Capacitor	C190,C215,C718	Telcordia Issue 1	Level I		3.00	0.004527	.0610	220919666.10
1122522890	Capacitor	C193,C196	Telcordia Issue 1	Level I		2.00	0.004527	.0406	220919666.10
1121647780	Capacitor	C195,C234	Telcordia Issue 1	Level I		2.00	0.004527	.0406	220919666.10
118961018A	Capacitor	C199,C251	Telcordia Issue 1	Level I		2.00	0.004527	.0406	220919666.10
1121647480	Capacitor	C238	Telcordia Issue 1	Level I		1.00	0.004527	.0203	220919666.10
1189633162	Capacitor	C757,C758,C760, C761	Telcordia Issue 1	Level I		4.00	0.004527	.0813	220919666.10
1189633184	Capacitor	C759,C766,C767	Telcordia Issue 1	Level I		3.00	0.004527	.0610	220919666.10
16515A2995	Connection	DIMM1	Telcordia Issue 1	Level I		1.00	0.001132	.0051	883385841.65
16515A2993	Connection	DIMM2	Telcordia Issue 1	Level I		1.00	0.001132	.0051	883385841.65
1305100541	Semiconductor	D1,D14,D15,D16,D17, D2,D3,D4	Telcordia Issue 1	Level I		8.00	0.023812	.8550	41994887.40
1301400541	Semiconductor	D13,D31,D5	Telcordia Issue 1	Level I		3.00	0.023812	.3206	41994887.40
1301400642	Semiconductor	D18,D19,D26,D6	Telcordia Issue 1	Level I		4.00	0.023812	.4275	41994887.40
1305099140	Semiconductor	D8,D9	Telcordia Issue 1	Level I		2.00	0.079375	.7125	12598466.22
1301005444	Semiconductor	D10,D11,D12	Telcordia Issue 1	Level I		3.00	0.023812	.3206	41994887.40
1300414843	Semiconductor	D22,D23,D24,D25, D28,D29	Telcordia Issue 1	Level I		6.00	0.023812	.6413	41994887.40
121230603S	Inductor	FB1,FB13,FB2,FB26, FB27,FB30,FB4,FB44, FB45,FB46,FB49,FB5, FB50,FB6,FB7,FB8	Telcordia Issue 1	Level I		16.00	0.002263	.1625	441839332.19
12123D0000	Inductor	FB15,FB3	Telcordia Issue 1	Level I		2.00	0.002263	.0203	441839332.19
1212306030	Resistor	FB10,FB11,FB12, FB14,FB16,FB17, FB18,FB19,FB20, FB21,FB22,FB23, FB37,FB38,FB39, FB40,FB41,FB42, FB43,FB9	Telcordia Issue 1	Level I		20.00	0.011320	1.0162	88338584.16
12123C0003	Inductor	FB25,FB48	Telcordia Issue 1	Level I		2.00	0.002263	.0203	441839332.19
12123D0001	Inductor	FB28,FB29,FB31	Telcordia Issue 1	Level I		3.00	0.002263	.0305	441839332.19
121230603C	Inductor	FB32,FB33,FB34, FB35	Telcordia Issue 1	Level I		4.00	0.002263	.0406	441839332.19
121230603Z	Inductor	FB36	Telcordia Issue 1	Level I		1.00	0.002263	.0102	441839332.19
1752001601	Miscellaneous	FS1,FS2	Telcordia Issue 1	Level I		2.00	0.003000	.0269	33333333.33
121110336C	Inductor	L1,L2	Telcordia Issue 1	Level I		2.00	0.002263	.0203	441839332.19

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**Temp. (°C)** 24.90



**Description**  
**File Name** FWS-2200.RPJ  
**Time** 11:30  
**Failure Rate** 22.279395  
**MTBF** 44,885

Part Number	Category	Location	Calculation Model	Quality	Tem. Rise	Quantity	Failure Rate, Unit	Failure Rate, %	MTBF, Unit
1211106872	Inductor	L5	Telcordia Issue 1	Level I		1.00	0.002263	.0102	441839332.19
121110106D	Inductor	L10,L6,L7,L8,L9	Telcordia Issue 1	Level I		5.00	0.002263	.0508	441839332.19
121110106G	Inductor	L18,L25,L64	Telcordia Issue 1	Level I		3.00	0.086004	1.1581	11627350.85
1654262300	Connection	MPC11	Telcordia Issue 1	Level I		1.00	0.070185	.3150	14248158.74
1314111719	Integrated Circuit	Q1	Telcordia Issue 1			1.00	0.058933	.2645	16968377.18
1315700216	Semiconductor	Q17,Q2,Q20,Q21,Q22, Q34,Q35,Q38,Q39,Q4, Q40,Q5,Q50,Q51,Q52, Q53,Q54,Q55,Q56, Q57,Q58,Q59,Q6,Q60, Q61,Q66,Q67,Q68, Q69,Q7,Q70,Q71,Q72, Q73,Q74,Q77,Q78, Q79,Q8,Q80,Q9,Q91, Q92	Telcordia Issue 1	Level I		43.00	0.079375	15.3196	12598466.22
1310390413	Semiconductor	Q3,Q45,Q48,Q65	Telcordia Issue 1	Level I		4.00	0.023812	.4275	41994887.40
1315889611	Semiconductor	Q10,Q33,Q62	Telcordia Issue 1	Level I		3.00	0.079375	1.0688	12598466.22
1311138610	Semiconductor	Q11,Q12,Q13,Q14, Q23,Q25,Q26,Q27, Q28,Q29,Q30,Q31	Telcordia Issue 1	Level I		12.00	0.023812	1.2826	41994887.40
1315441012	Semiconductor	Q15,Q16,Q18,Q19, Q47,Q63,Q64,Q84, Q85,Q86,Q87	Telcordia Issue 1	Level I		11.00	0.079375	3.9190	12598466.22
1315050311	Integrated Circuit	Q42	Telcordia Issue 1	Level I		1.00	0.058933	.2645	16968377.18
1315R30310	Integrated Circuit	Q44	Telcordia Issue 1	Level I		1.00	0.058933	.2645	16968377.18
1311390612	Semiconductor	Q46	Telcordia Issue 1	Level I		1.00	0.023812	.1069	41994887.40
131411171C	Integrated Circuit	Q76	Telcordia Issue 1	Level I		1.00	0.058933	.2645	16968377.18
1540775081	Resistor	RN1,RN2,RN3,RN4, RN5,RN6	Telcordia Issue 1	Level I		6.00	0.006217	.1674	160836724.71
1540782282	Resistor	RN10,RN11,RN14,RN7, RN8,RN9	Telcordia Issue 1	Level I		6.00	0.012435	.3349	80418362.36
1540710382	Resistor	RN15,RN16,RN17	Telcordia Issue 1	Level I		3.00	0.006217	.0837	160836724.71
106B501032	Resistor	RT1,RT4	Telcordia Issue 1	Level I		2.00	0.011320	.1016	88338584.16
106B510030	Resistor	RT2	Telcordia Issue 1	Level I		1.00	0.011320	.0508	88338584.16







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105A549913	Resistor	R104,R105,R116, R120,R122,R193, R201,R205,R222, R223,R224,R227, R231,R235,R236, R237,R238,R239, R686	Telcordia Issue 1	Level I		19.00	0.002263	.1930	441839332.19
105A700003	Resistor	R107,R191,R230, R244,R510,R570, R678,R723,R794, R902,R909,R910, R915,R916,R928, R931,R936	Telcordia Issue 1	Level I		17.00	0.002263	.1727	441839332.19
1059710001	Resistor	R131,R814,R817, R818,R819,R820	Telcordia Issue 1	Level I		6.00	0.002263	.0610	441839332.19
105A549969	Resistor	R137,R228,R272	Telcordia Issue 1	Level I		3.00	0.002263	.0305	441839332.19
105A500239	Resistor	R139,R536,R587	Telcordia Issue 1	Level I		3.00	0.002263	.0305	441839332.19
105A710039	Resistor	R140,R273,R781	Telcordia Issue 1	Level I		3.00	0.002263	.0305	441839332.19
105A702229	Resistor	R162,R406,R448, R451,R488,R491, R538,R589,R599, R706,R707,R708, R709,R710,R711, R721,R722,R724, R736,R746	Telcordia Issue 1	Level I		20.00	0.002263	.2032	441839332.19
105A702263	Resistor	R167,R170,R498, R503,R512,R520, R913	Telcordia Issue 1	Level I		7.00	0.002263	.0711	441839332.19
105A507533	Resistor	R168,R171,R917, R922,R933,R937	Telcordia Issue 1	Level I		6.00	0.002263	.0610	441839332.19
105A702209	Resistor	R174,R196,R385, R395,R397,R400, R436,R437,R438, R439,R440,R450, R949,R950	Telcordia Issue 1	Level I		14.00	0.002263	.1422	441839332.19
105A590923	Resistor	R180	Telcordia Issue 1	Level I		1.00	0.002263	.0102	441839332.19
105A505633	Resistor	R181,R661	Telcordia Issue 1	Level I		2.00	0.002263	.0203	441839332.19
105A701003	Resistor	R192,R198	Telcordia Issue 1	Level I		2.00	0.002263	.0203	441839332.19
105A504763	Resistor	R246,R264	Telcordia Issue 1	Level I		2.00	0.002263	.0203	441839332.19
105A514014	Resistor	R248	Telcordia Issue 1	Level I		1.00	0.002263	.0102	441839332.19
105A711033	Resistor	R274,R279	Telcordia Issue 1	Level I		2.00	0.002263	.0203	441839332.19
105A702053	Resistor	R275	Telcordia Issue 1	Level I		1.00	0.013580	.0610	73639888.70
105A704729	Resistor	R294,R299,R342, R356,R369,R396, R423,R523,R952	Telcordia Issue 1	Level I		9.00	0.002263	.0914	441839332.19
105A733009	Resistor	R324,R583,R826	Telcordia Issue 1	Level I		3.00	0.002263	.0305	441839332.19

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105A502003	Resistor	R408,R505	Telcordia Issue 1	Level I		2.00	0.002263	.0203	441839332.19
105A500103	Resistor	R441,R469,R550, R700	Telcordia Issue 1	Level I		4.00	0.002263	.0406	441839332.19
1059701001	Resistor	R471	Telcordia Issue 1	Level I		1.00	0.002263	.0102	441839332.19
105A575033	Resistor	R474	Telcordia Issue 1	Level I		1.00	0.002263	.0102	441839332.19
105A536533	Resistor	R475	Telcordia Issue 1	Level I		1.00	0.002263	.0102	441839332.19
105A515033	Resistor	R476	Telcordia Issue 1	Level I		1.00	0.002263	.0102	441839332.19
105A580623	Resistor	R477	Telcordia Issue 1	Level I		1.00	0.002263	.0102	441839332.19
1050513034	Resistor	R478	Telcordia Issue 1	Level I		1.00	0.002263	.0102	441839332.19
1050504724	Resistor	R480	Telcordia Issue 1	Level I		1.00	0.002263	.0102	441839332.19
105A554923	Resistor	R481	Telcordia Issue 1	Level I		1.00	0.002263	.0102	441839332.19
105A584523	Resistor	R487	Telcordia Issue 1	Level I		1.00	0.002263	.0102	441839332.19
105A701009	Resistor	R490,R492,R508, R627,R628,R629, R630,R703,R918, R925,R926	Telcordia Issue 1	Level I		11.00	0.002263	.1117	441839332.19
105A502033	Resistor	R499	Telcordia Issue 1	Level I		1.00	0.002263	.0102	441839332.19
105A708229	Resistor	R501,R526,R556, R561,R786,R795, R796,R799,R801	Telcordia Issue 1	Level I		9.00	0.002263	.0914	441839332.19
105A586603	Resistor	R511	Telcordia Issue 1	Level I		1.00	0.002263	.0102	441839332.19
105A706809	Resistor	R522	Telcordia Issue 1	Level I		1.00	0.002263	.0102	441839332.19
105A505109	Resistor	R527,R529,R530, R532,R542,R754	Telcordia Issue 1	Level I		6.00	0.002263	.0610	441839332.19
105A524963	Resistor	R534,R692,R727	Telcordia Issue 1	Level I		3.00	0.002263	.0305	441839332.19
1050533034	Resistor	R537,R750	Telcordia Issue 1	Level I		2.00	0.002263	.0203	441839332.19
105A705609	Resistor	R544,R741	Telcordia Issue 1	Level I		2.00	0.002263	.0203	441839332.19
105A502133	Resistor	R562	Telcordia Issue 1	Level I		1.00	0.002263	.0102	441839332.19
105A702033	Resistor	R581,R839	Telcordia Issue 1	Level I		2.00	0.002263	.0203	441839332.19
105A701053	Resistor	R582,R687	Telcordia Issue 1	Level I		2.00	0.002263	.0203	441839332.19
105A501133	Resistor	R591	Telcordia Issue 1	Level I		1.00	0.002263	.0102	441839332.19
105A747039	Resistor	R596	Telcordia Issue 1	Level I		1.00	0.002263	.0102	441839332.19
105A507503	Resistor	R614,R615,R618	Telcordia Issue 1	Level I		3.00	0.002263	.0305	441839332.19
105A705133	Resistor	R638,R639	Telcordia Issue 1	Level I		2.00	0.002263	.0203	441839332.19
105A501033	Resistor	R660,R664,R666, R667,R668,R751	Telcordia Issue 1	Level I		6.00	0.002263	.0610	441839332.19
105A502233	Resistor	R669	Telcordia Issue 1	Level I		1.00	0.002263	.0102	441839332.19
105A501533	Resistor	R670,R757	Telcordia Issue 1	Level I		2.00	0.002263	.0203	441839332.19
1052730009	Resistor	R671	Telcordia Issue 1	Level I		1.00	0.002263	.0102	441839332.19
1052510009	Resistor	R672	Telcordia Issue 1	Level I		1.00	0.002263	.0102	441839332.19

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**Environment** GF, GU - Ground Fixed, Uncontrolled  
**Temp. (°C)** 24.90



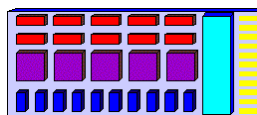
**Description**  
**File Name** FWS-2200.RPJ  
**Time** 11:30  
**Failure Rate** 22.279395  
**MTBF** 44,885

Part Number	Category	Location	Calculation Model	Quality	Tem. Rise	Quantity	Failure Rate, Unit	Failure Rate, %	MTBF, Unit
105A532413	Resistor	R690	Telcordia Issue 1	Level I		1.00	0.002263	.0102	441839332.19
105A545303	Resistor	R691	Telcordia Issue 1	Level I		1.00	0.002263	.0102	441839332.19
105A580663	Resistor	R697,R699	Telcordia Issue 1	Level I		2.00	0.002263	.0203	441839332.19
105A566503	Resistor	R735	Telcordia Issue 1	Level I		1.00	0.002263	.0102	441839332.19
105A502803	Resistor	R758	Telcordia Issue 1	Level I		1.00	0.002263	.0102	441839332.19
1050533214	Resistor	R760	Telcordia Issue 1	Level I		1.00	0.002263	.0102	441839332.19
105A549963	Resistor	R761,R769	Telcordia Issue 1	Level I		2.00	0.002263	.0203	441839332.19
105A597604	Resistor	R763	Telcordia Issue 1	Level I		1.00	0.002263	.0102	441839332.19
105A575009	Resistor	R764	Telcordia Issue 1	Level I		1.00	0.002263	.0102	441839332.19
105A510053	Resistor	R767	Telcordia Issue 1	Level I		1.00	0.013580	.0610	73639888.70
105A747009	Resistor	R770,R771,R772	Telcordia Issue 1	Level I		3.00	0.002263	.0305	441839332.19
105A702733	Resistor	R824,R840,R842	Telcordia Issue 1	Level I		3.00	0.002263	.0305	441839332.19
105A590900	Resistor	R833	Telcordia Issue 1	Level I		1.00	0.002263	.0102	441839332.19
1050502224	Resistor	R834	Telcordia Issue 1	Level I		1.00	0.002263	.0102	441839332.19
105A528723	Resistor	R932	Telcordia Issue 1	Level I		1.00	0.002263	.0102	441839332.19
105A703363	Resistor	R934,R935,R947	Telcordia Issue 1	Level I		3.00	0.002263	.0305	441839332.19
105A573223	Resistor	R938	Telcordia Issue 1	Level I		1.00	0.002263	.0102	441839332.19
105A506823	Resistor	R942,R943	Telcordia Issue 1	Level I		2.00	0.002263	.0203	441839332.19
105A703323	Resistor	R977	Telcordia Issue 1	Level I		1.00	0.002263	.0102	441839332.19
105A733003	Resistor	R1012,R1014	Telcordia Issue 1	Level I		2.00	0.002263	.0203	441839332.19
11G235210611390	Capacitor	C712,C721,C727, C728,C745,C754,TC1, TC10,TC102,TC103, TC104,TC105,TC106, TC107,TC108,TC109, TC11,TC111,TC112, TC113,TC12,TC13, TC14,TC15,TC16, TC17,TC18,TC19,TC2, TC20,TC21,TC22, TC23,TC24,TC25, TC26,TC27,TC28, TC29,TC3,TC30,T	Telcordia Issue 1	Level I		89.00	0.004527	1.8082	220919666.10
14S3003700	Inductor	T1,T2,T3,T4,T5,T6	Telcordia Issue 1	Level I		6.00	0.135796	3.6571	7363988.87
14S4021301	Integrated Circuit	U2,U3	Telcordia Issue 1	Level I		2.00	0.058933	.5290	16968377.18
1315970211	Semiconductor	U39,U4	Telcordia Issue 1	Level I		2.00	0.158749	1.4251	6299233.11
14S6308002	Integrated Circuit	U13,U17,U5,U6, U9	Telcordia Issue 1	Level I		5.00	0.035621	.7994	28073518.38
14S6308002	Integrated Circuit	U19	Telcordia Issue 1	Level I	32.50	1.00	0.304314	1.3659	3286084.67



### AAEON Reliability Prediction Report

**Part Number** 9697220032-D  
**Reference Des**  
**Date** 06. 14, 2012  
**Environment** GF, GU - Ground Fixed, Uncontrolled  
**Temp. (°C)** 24.90



**Description**  
**File Name** FWS-2200.RPJ  
**Time** 11:30  
**Failure Rate** 22.279395  
**MTBF** 44,885

Part Number	Category	Location	Calculation Model	Quality	Tem. Rise	Quantity	Failure Rate, Unit	Failure Rate, %	MTBF, Unit
1121701790	Capacitor	C11,C119,C12,C145, C146,C147,C148, C149,C150,C151, C152,C165,C166, C167,C168,C169, C170,C171,C172, C173,C174,C175, C176,C177,C178, C179,C180,C192,C2, C27,C30,C32,C34, C36,C38,C39,C40, C42,C8,C9	Telcordia Issue 1	Level I		40.00	0.004527	.8127	220919666.10
1121501691	Capacitor	BC10,BC100,BC101, BC102,BC103,BC104, BC11,BC110,BC111, BC112,BC113,BC114, BC115,BC116,BC117, BC119,BC12,BC122, BC123,BC124,BC125, BC126,BC127,BC128, BC129,BC13,BC130, BC131,BC132,BC133, BC136,BC137,BC138, BC139,BC14,BC140, BC141,BC142,BC1	Telcordia Issue 1	Level I		298.00	0.004527	6.0545	220919666.10
11E9501090	Capacitor	C100,C102,C104, C106,C107,C108, C110,C114,C13,C181, C205,C208,C211, C213,C214,C218, C219,C220,C222, C223,C224,C227, C229,C230,C231, C232,C233,C235, C237,C24,C242,C25, C250,C41,C43,C62, C65,C715,C717,C726, C729,C95,C96,C9	Telcordia Issue 1	Level I		44.00	0.004527	.8940	220919666.10
11E9647680	Capacitor	C17,C19,C20,C206, C3,C44,C47,C48,C49, C51,C52,C53,C54, C55,C56,C85,C86, C87	Telcordia Issue 1	Level I		18.00	0.004527	.3657	220919666.10
11E1647650	Capacitor	C756	Telcordia Issue 1	Level I		1.00	0.004527	.0203	220919666.10

**AAEON Reliability Prediction Report**

**Part Number** 9697220032-D  
**Reference Des**  
**Date** 06. 14, 2012  
**Environment** GF, GU - Ground Fixed, Uncontrolled  
**Temp. (°C)** 24.90



**Description**  
**File Name** FWS-2200.RPJ  
**Time** 11:30  
**Failure Rate** 22.279395  
**MTBF** 44,885

Part Number	Category	Location	Calculation Model	Quality	Tem. Rise	Quantity	Failure Rate, Unit	Failure Rate, %	MTBF, Unit
11C4501790	Capacitor	C111,C112,C113, C115,C116,C117, C120,C121,C4,C5,C6, C7	Telcordia Issue 1	Level I		12.00	0.004527	.2438	220919666.10
1655404020	Connection	ATX1	Telcordia Issue 1	Level I		1.00	0.002264	.0102	441692920.82
1655004014	Connection	AUXFAN1,CPUFAN1, SYSFAN1	Telcordia Issue 1	Level I		3.00	0.001132	.0152	883385841.65
1750220320	Connection	BT1	Telcordia Issue 1	Level I		1.00	0.001132	.0051	883385841.65
1759100007	Miscellaneous	BUZZ1	Telcordia Issue 1	Level I		1.00	0.150000	.6733	6666666.67
1653002100	Connection	JP7	Telcordia Issue 1	Level I		1.00	0.001132	.0051	883385841.65
1655004011	Connection	CN2	Telcordia Issue 1	Level I		1.00	0.022640	.1016	44169292.08
1653008100	Connection	CN3	Telcordia Issue 1	Level I		1.00	0.004528	.0203	220846460.41
165300420F	Connection	CN14	Telcordia Issue 1	Level I		1.00	0.004528	.0203	220846460.41
165440910B	Connection	COM1	Telcordia Issue 1	Level I		1.00	0.022640	.1016	44169292.08
165320520E	Connection	COM2	Telcordia Issue 1	Level I		1.00	0.005660	.0254	176677168.33
11031-0001F0MI	Capacitor	C762,C764,EC6	Telcordia Issue 1	Level I		3.00	0.004527	.0610	220919666.10
111961029D	Capacitor	C763,C765,EC4	Telcordia Issue 1	Level I		3.00	0.070751	.9527	14134173.47
1119622196	Capacitor	EC1,EC12	Telcordia Issue 1	Level I		2.00	0.070751	.6351	14134173.47
1112647110	Capacitor	EC2,EC3	Telcordia Issue 1	Level I		2.00	0.070751	.6351	14134173.47
11031-0004F0MI	Capacitor	EC10	Telcordia Issue 1	Level I		1.00	0.004527	.0203	220919666.10
1653005207	Connection	FP1	Telcordia Issue 1	Level I		1.00	0.005660	.0254	176677168.33
1653005201	Connection	USB2	Telcordia Issue 1	Level I		1.00	0.005660	.0254	176677168.33
1653003101	Connection	JP3,JP6	Telcordia Issue 1	Level I		2.00	0.001698	.0152	588923894.43
1653300102	Connection	JP3(1-2),JP6(1-2)	Telcordia Issue 1	Level I		2.00	0.001132	.0102	883385841.65
165251220H	Connection	LAN1,LAN2,LAN3, LAN4,LAN5,LAN6	Telcordia Issue 1	Level I		6.00	0.001132	.0305	883385841.65
1304100250	Semiconductor	LED7,LED9	Telcordia Issue 1	Level I		2.00	0.004832	.0434	206947616.14
1304451450	Semiconductor	LED1,LED2,LED3, LED4,LED5,LED6	Telcordia Issue 1	Level I		6.00	0.004832	.1301	206947616.14
1601110201	Connection	RSW1	Telcordia Issue 1	Level I		1.00	0.022640	.1016	44169292.08
1654907002	Connection	SATA1,SATA2	Telcordia Issue 1	Level I		2.00	0.003962	.0356	252395954.76
1654808309	Connection	USB1	Telcordia Issue 1	Level I		1.00	0.001132	.0051	883385841.65
165320820G	Connection	VGA1	Telcordia Issue 1	Level I		1.00	0.001132	.0051	883385841.65
1601615600	Connection	PSW1	Telcordia Issue 1	Level I		1.00	0.001132	.0051	883385841.65

### AAEON Reliability Prediction Report

**Part Number** 9697220032-D  
**Reference Des**  
**Date** 06. 14, 2012  
**Environment** GF, GU - Ground Fixed, Uncontrolled  
**Temp. (°C)** 24.90



**Description**  
**File Name** FWS-2200.RPJ  
**Time** 11:30  
**Failure Rate** 22.279395  
**MTBF** 44,885

Part Number	Category	Location	Calculation Model	Quality	Tem. Rise	Quantity	Failure Rate, Unit	Failure Rate,%	MTBF, Unit
1751300005	Relay	RELAY1,RELAY10, RELAY11,RELAY12, RELAY13,RELAY14, RELAY15,RELAY16, RELAY2,RELAY3, RELAY4,RELAY5, RELAY6,RELAY7, RELAY8,RELAY9	Telcordia Issue 1	Level I		16.00	0.316857	22.7552	3155995.23
1304400150	Semiconductor	LED8	Telcordia Issue 1	Level I		1.00	0.004832	.0217	206947616.14
14S6203204	Integrated Circuit		Telcordia Issue 1	Level I		1.00	0.026029	.1168	38418616.55