

# ECB-917T

## Reliability Prediction Report

### (MTBF)

Summary	Failure Rate: 14.276447 ppm MTBF: 70,045 Hours
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Issue date	Approval	Test Engineer
2012/05/14	Vincent Chen	Jessica Chou

# Reliability Prediction (MTBF)

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**I . Model Name:** ECB-917T(9697917T03-D)

**II . Prediction Date:** May 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: 25 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:**

ECB-917T (9697917T03-D):

- Failure Rate: 14.276447ppm
- MTBF: 70,045 Hours

### AAEON Reliability Prediction Report

**Part Number** 9697917T03-D  
**Reference Des**  
**Date** 05. 14, 2012  
**Environment** GF, GU - Ground Fixed, Uncontrolled  
**Temp. (°C)** 25.00



**Description** Top-level assembly  
**File Name** ECB-917T.RPJ  
**Time** 13:50  
**Failure Rate** 14.276447  
**MTBF** 70,045

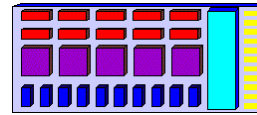
Assembly Name	Part Number	Model	Method	Environment	Duty Cycle	Qty	Failure Rate	MTBF
ECB-917T	9697917T03-D	Telcordia Issue 1	Method I Case 3	GF, GU - Ground Fixed, Uncontrolled	100.00	1.00	14.28	70045.44





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**Time** 13:50  
**Failure Rate** 14.276447  
**MTBF** 70,045

Part Number	Category	Location	Calculation Model	Quality	Tem. Rise	Quantity	Failure Rate, Unit	Failure Rate, %	MTBF, Unit
105A700009	Resistor	R103,R111,R114, R126,R145,R151, R156,R158,R161, R167,R174,R185, R193,R23,R250,R256, R3,R31,R313,R325, R330,R352,R354, R361,R363,R369, R372,R373,R374, R382,R384,R387, R388,R389,R390, R392,R402,R403, R405,R406,R410,	Telcordia Issue 1	Level I		144.00	0.002268	2.2873	440974090.03
105A702229	Resistor	R522,R527,R532, R537,R540,R542, R554,R557,R628, R630	Telcordia Issue 1	Level I		10.00	0.002268	.1588	440974090.03
105A704729	Resistor	R102,R107,R110, R112,R115,R121, R123,R125,R127, R140,R147,R154, R184,R194,R214,R22, R228,R244,R245, R246,R249,R25,R251, R26,R27,R28,R323, R337,R341,R347, R366,R371,R395, R398,R399,R400, R417,R425,R440, R503,R504,R510,	Telcordia Issue 1	Level I		65.00	0.002268	1.0325	440974090.03
105A708229	Resistor	R16,R259,R316,R332, R336,R339,R34,R358, R36,R362,R367,R37, R404,R409,R413, R427,R55	Telcordia Issue 1	Level I		17.00	0.002268	.2700	440974090.03
105A710039	Resistor	R131,R138,R139, R144,R198,R203, R205,R212,R213, R219,R340,R351, R377,R378,R458, R460,R589,R590, R713,R76,R86,R96	Telcordia Issue 1	Level I		22.00	0.002268	.3495	440974090.03
105A733009	Resistor	R13,R2,R321,R386, R441,R454,R455, R463,R551,R627,R9	Telcordia Issue 1	Level I		11.00	0.002268	.1747	440974090.03





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1129610051	Capacitor	C1,C11,C143,C152, C155,C156,C160, C163,C178,C179, C180,C181,C183, C188,C199,C207, C214,C232,C236, C241,C253,C254,C26, C28,C288,C305,C306, C307,C317,C327,C33, C348,C349,C350, C351,C354,C355,C43, C48,C49,C58,C59, C60,C69,C83	Telcordia Issue 1	Level I		45.00	0.004535	1.4296	220487045.01
1129622690	Capacitor	C151	Telcordia Issue 1	Level I		1.00	0.004535	.0318	220487045.01
1129710090	Capacitor	C279,C280,C281, C300,C301,C34	Telcordia Issue 1	Level I		6.00	0.004535	.1906	220487045.01
1181647080	Capacitor	C130,C131,C334, C335,C336	Telcordia Issue 1	Level I		5.00	0.004535	.1588	220487045.01
1189615151	Capacitor	C144,C206,C208, C227,C229,C35,C44	Telcordia Issue 1	Level I		7.00	0.004535	.2224	220487045.01
1189633180	Capacitor	C22	Telcordia Issue 1	Level I		1.00	0.004535	.0318	220487045.01
11C1501080	Capacitor	C115,C116,C118, C119,C24,C255,C337, C338,C98	Telcordia Issue 1	Level I		9.00	0.004535	.2859	220487045.01
11C1522650	Capacitor	C326,C38,C55	Telcordia Issue 1	Level I		3.00	0.004535	.0953	220487045.01
11C2510480	Capacitor	C140,C15,C202,C23, C316,C319,C320, C321,C322,C324,C42	Telcordia Issue 1	Level I		11.00	0.004535	.3495	220487045.01
11E1647650	Capacitor	C270,C283,C289, C299,C308,C313	Telcordia Issue 1	Level I		6.00	0.004535	.1906	220487045.01
11E2510060	Capacitor	C105,C108,C139, C190,C200,C25,C30, C356,C40,C76,C94, C95	Telcordia Issue 1	Level I		12.00	0.004535	.3812	220487045.01
11E9501090	Capacitor	C138,C194,C20,C21, C265,C274,C275, C276,C284,C285, C286,C287,C290, C309,C56,C67,C82	Telcordia Issue 1	Level I		17.00	0.004535	.5401	220487045.01
121110336Y	Inductor	L1,L2	Telcordia Issue 1	Level I		2.00	0.086173	1.2072	11604581.32
12123C0006	Inductor	L19,L20,L21,L25, L27,L28	Telcordia Issue 1	Level I		6.00	0.002268	.0953	440974090.03
12123C0010	Inductor	L10,L11,L12,L13, L14,L15,L16,L17, L18,L26,L3,L4,L5, L6,L7,L8,L9	Telcordia Issue 1	Level I		17.00	0.002268	.2700	440974090.03
12123C0011	Inductor	L22,L23,L24	Telcordia Issue 1	Level I		3.00	0.002268	.0477	440974090.03

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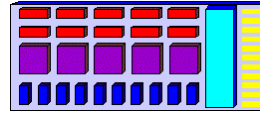


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**File Name** ECB-917T.RPJ  
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Part Number	Category	Location	Calculation Model	Quality	Tem. Rise	Quantity	Failure Rate, Unit	Failure Rate, %	MTBF, Unit
1214309008	Inductor	CH1,CH10,CH11,CH12, CH13,CH14,CH15,CH2, CH3,CH4,CH5,CH6, CH7,CH8,CH9	Telcordia Issue 1	Level I		15.00	0.002268	.2383	440974090.03
123132505D	Miscellaneous	Y1	Telcordia Issue 1	Level I		1.00	0.150000	1.0507	6666666.67
1233348053	Miscellaneous	OSC1	Telcordia Issue 1	Level I		1.00	0.360000	2.5216	2777777.78
1301005444	Semiconductor	D2,D4	Telcordia Issue 1	Level I		2.00	0.023881	.3346	41874327.58
1301400541	Semiconductor	D14,D18,D19,D3,D31, D36,D38,D40,D5,D6, D7,D9	Telcordia Issue 1	Level I		12.00	0.023881	2.0073	41874327.58
1301400642	Semiconductor	D10,D11,D12,D13, D15,D16,D17,D28, D29,D30,D32,D33, D39,D8	Telcordia Issue 1	Level I		14.00	0.023881	2.3419	41874327.58
1304000043	Semiconductor	LED5	Telcordia Issue 1	Level I		1.00	0.004877	.0342	205063180.81
1304101440	Semiconductor	LED1,LED2,LED3, LED4	Telcordia Issue 1	Level I		4.00	0.004877	.1366	205063180.81
1305100541	Semiconductor	D20,D21,D22,D23, D24,D25,D26,D27, D34,D35,D37,D41, D42,D43,D44	Telcordia Issue 1	Level I		15.00	0.023881	2.5091	41874327.58
1305EUSB40	Semiconductor	U35,U36,U37,U38	Telcordia Issue 1	Level I		4.00	0.023881	.6691	41874327.58
1310390413	Semiconductor	Q11,Q16,Q29,Q31, Q36,Q50,Q51	Telcordia Issue 1	Level I		7.00	0.023881	1.1709	41874327.58
1311138610	Semiconductor	Q58,Q59	Telcordia Issue 1	Level I		2.00	0.023881	.3346	41874327.58
1311390610	Semiconductor	Q28,Q30	Telcordia Issue 1	Level I		2.00	0.023881	.3346	41874327.58
131411171H	Integrated Circuit	Q39	Telcordia Issue 1	Level I		1.00	0.059366	.4158	16844654.92
1314570810	Semiconductor	U34	Telcordia Issue 1	Level I		1.00	0.047762	.3346	20937163.79
1315230511	Semiconductor	Q10,Q17,Q45,Q47, Q48	Telcordia Issue 1	Level I		5.00	0.079603	2.7879	12562298.27
1315441012	Semiconductor	Q2,Q3,Q5,Q6,Q8,Q9	Telcordia Issue 1	Level I		6.00	0.079603	3.3455	12562298.27
1315667910	Semiconductor	Q1,Q12,Q22,Q4,Q55, Q7	Telcordia Issue 1	Level I		6.00	0.159207	6.6910	6281149.14
1315686110	Semiconductor	U26,U39,U40,U44, U45	Telcordia Issue 1	Level I		5.00	0.079603	2.7879	12562298.27
1315700216	Semiconductor	Q13,Q14,Q15,Q18, Q19,Q20,Q21,Q23, Q24,Q25,Q26,Q27, Q32,Q33,Q34,Q35, Q37,Q38,Q40,Q41, Q42,Q43,Q44,Q46, Q49,Q52,Q53,Q54, Q56,Q57	Telcordia Issue 1	Level I		30.00	0.079603	16.7275	12562298.27
14S2200900	Integrated Circuit	U48	Telcordia Issue 1	Level I		1.00	0.059366	.4158	16844654.92
14S2921400	Integrated Circuit	U1	Telcordia Issue 1	Level I		1.00	0.059366	.4158	16844654.92
14S2921400	Integrated Circuit	U3	Telcordia Issue 1	Level I	19.20	1.00	0.222137	1.5560	4501735.53
14S3052400	Integrated Circuit	U50,U51,U52,U53	Telcordia Issue 1	Level I		4.00	0.059366	1.6633	16844654.92
14S3089200	Integrated Circuit	U49	Telcordia Issue 1	Level I	16.90	1.00	0.067038	.4696	14916959.16

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14S3115001	Integrated Circuit	U4	Telcordia Issue 1	Level I		1.00	0.059366	.4158	16844654.92
14S3524700	Integrated Circuit	U11	Telcordia Issue 1	Level I		1.00	0.059366	.4158	16844654.92
14S4021301	Integrated Circuit	U16,U17	Telcordia Issue 1	Level I		2.00	0.059366	.8317	16844654.92
14S4048502	Integrated Circuit	U18,U19	Telcordia Issue 1	Level I		2.00	0.059366	.8317	16844654.92
14S4081102	Integrated Circuit	U30	Telcordia Issue 1	Level I		1.00	0.026183	.1834	38193355.79
14S4195710	Integrated Circuit	U12	Telcordia Issue 1	Level I		1.00	0.059366	.4158	16844654.92
14S4258300	Integrated Circuit	U43	Telcordia Issue 1	Level I		1.00	0.026183	.1834	38193355.79
14S4322200	Integrated Circuit	U24	Telcordia Issue 1	Level I		1.00	0.059366	.4158	16844654.92
14S4362707	Integrated Circuit	U6	Telcordia Issue 1	Level I		1.00	0.026183	.1834	38193355.79
14S4650601	Integrated Circuit	U7	Telcordia Issue 1	Level I		1.00	0.059366	.4158	16844654.92
14S4910400	Integrated Circuit	U15	Telcordia Issue 1	Level I	20.10	1.00	0.079204	.5548	12625625.92
14S4911216	Integrated Circuit	U2	Telcordia Issue 1	Level I		1.00	0.059366	.4158	16844654.92
14S5812300	Integrated Circuit	U5	Telcordia Issue 1	Level I		1.00	0.026183	.1834	38193355.79
14S5812502	Integrated Circuit	U22	Telcordia Issue 1	Level I		1.00	0.026183	.1834	38193355.79
14S5912300	Integrated Circuit	U28	Telcordia Issue 1	Level I		1.00	0.026183	.1834	38193355.79
14S5A00401	Integrated Circuit	U10,U14,U21,U23, U25,U27,U29,U31, U33	Telcordia Issue 1	Level I		9.00	0.026183	1.6506	38193355.79
14S5A00702	Integrated Circuit	U54	Telcordia Issue 1	Level I		1.00	0.059366	.4158	16844654.92
14S5A00703	Integrated Circuit	U13	Telcordia Issue 1	Level I		1.00	0.026183	.1834	38193355.79
14S5A12506	Integrated Circuit	U20	Telcordia Issue 1	Level I		1.00	0.026183	.1834	38193355.79
14S6308002	Integrated Circuit	U42	Telcordia Issue 1	Level I		1.00	0.035882	.2513	27868824.73
14S9301200	Integrated Circuit	U8	Telcordia Issue 1	Level I		1.00	0.059366	.4158	16844654.92
14S9341101	Integrated Circuit	U46,U47	Telcordia Issue 1	Level I		2.00	0.026183	.3668	38193355.79
14S9811500	Integrated Circuit	U9	Telcordia Issue 1	Level I		1.00	0.059366	.4158	16844654.92
1600030203	Connection	SW3	Telcordia Issue 1	Level I		1.00	0.001138	.0080	878780270.71
165300420L	Connection	CN22	Telcordia Issue 1	Level I		1.00	0.004552	.0319	219695067.68
165320520C	Connection	USB1	Telcordia Issue 1	Level I		1.00	0.005690	.0399	175756054.14
1653212100	Connection	CN2,CN3	Telcordia Issue 1	Level I		2.00	0.006828	.0956	146463378.45
1654040003	Connection	CN25	Telcordia Issue 1	Level I		1.00	0.022759	.1594	43939013.54
1654030003	Connection	CN16	Telcordia Issue 1	Level I		1.00	0.017069	.1196	58585351.38
16540M0001	Connection	CN12,CN15	Telcordia Issue 1	Level I		2.00	0.125173	1.7536	7988911.55
16540M0201	Connection	CN13,CN14,CN19	Telcordia Issue 1	Level I		3.00	0.125173	2.6303	7988911.55
1654226303	Connection	CN9	Telcordia Issue 1	Level I		1.00	0.001138	.0080	878780270.71
1654903900	Connection	CN26	Telcordia Issue 1	Level I		1.00	0.022759	.1594	43939013.54
1654926900	Connection	CN44	Telcordia Issue 1	Level I		1.00	0.029586	.2072	33799241.18
1752001601	Miscellaneous	FS1,FS2,FS3,FS4, FS5	Telcordia Issue 1	Level I		5.00	0.003000	.1051	33333333.33

