

# GENE-9315

## Reliability Prediction Report (MTBF)

Report NO : 09E070044

**12-03-2009**

Issue Date

**Wenyuan Yang**

Manager

**Jessica Chou**

Test Engineer

## Reliability Prediction (MTBF)

---

I . **Model Name:** GENE-9315 (9697931501-D)

II . **Prediction Date:** Dec. 3<sup>rd</sup>, 2009

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: 25.2 degrees C
- Standard: Telcordia (Bellcore) Standard

### VII. Term and Definition:

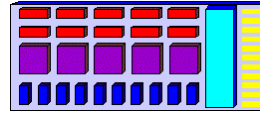
- Unit : An assembly of device.
- Duty Cycle : 100%
- Quantity : The quantity of the selected item.
- Failure Rate : Used to specify that the failure rate is to be calculated based the selected Calculation models. The multiplier is 1,000,000.
- MTBF : MTBF is always specified in hours.

### VIII. Prediction Result:

- GENE-9315 (9697931501-D) :  
Failure Rate: 17.067200 ppm  
MTBF: 58,592 Hours

### AAEON Reliability Prediction Report

**Part Number** 9697931501-D  
**Reference Des**  
**Date** 12. 3, 2009  
**Environment** GF, GU - Ground Fixed, Uncontrolled  
**Temp. (°C)** 25.20



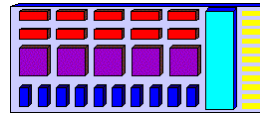
**Description** Top-level assembly  
**File Name** GENE-9315.RPJ  
**Time** 2:04 下午  
**Failure Rate** 17.067200  
**MTBF** 58,592

Assembly Name	Part Number	Model	Method	Environment	Duty Cycle	Qty	Failure Rate	MTBF
GENE-9315	9697931501-D	Telcordia Issue 1	Method I Case 3	GF, GU - Ground Fixed, Uncontrolled	100.00	1.00	17.07	58591.92



### AAEON Reliability Prediction Report

**Part Number** 9697931501-D  
**Reference Des**  
**Date** 12. 3, 2009  
**Environment** GF, GU - Ground Fixed, Uncontrolled  
**Temp. (°C)** 25.20



**Description** Top-level assembly  
**File Name** GENE-9315.RPJ  
**Time** 2:04 下午  
**Failure Rate** 17.067200  
**MTBF** 58,592

Part Number	Category	Location	Calculation Model	Quality	Tem. Rise	Quantity	Failure Rate, Unit	Failure Rate, %	MTBF, Unit
11E9647680	Capacitor	C104,C143,C16,C186, C191,C230,C277, C311,C335,C336,C35, C380,C472,C473, C506,C69	Telcordia Issue 1	Level I		16.00	0.004553	.4269	219625208.97
1129701791	Capacitor	C114,C116,C117, C119,C120,C122, C125,C132,C133, C147,C172,C178, C187,C223,C31,C425, C49,C511,C513,C515, C518,C521,C523, C536,C537	Telcordia Issue 1	Level I		25.00	0.004553	.6670	219625208.97
1122522890	Capacitor	C253,C36,C37,C43, C44,C66,C80	Telcordia Issue 1	Level I		7.00	0.004553	.1867	219625208.97
11E9501091	Capacitor	C113,C139,C140, C145,C148,C153, C162,C165,C166, C167,C168,C170, C171,C184,C196, C226,C227,C239, C245,C254,C259, C273,C285,C291, C312,C327,C332, C355,C356,C367, C390,C404,C411, C412,C414,C416, C417,C419,C422,	Telcordia Issue 1	Level I		57.00	0.004553	1.5207	219625208.97
11E9547490	Capacitor	C331,C338,C77,C83	Telcordia Issue 1	Level I		4.00	0.004553	.1067	219625208.97
1124427091	Capacitor	C102,C103,C146, C151,C174,C180, C321,C322,C482, C485,C529,C533, C539,C540	Telcordia Issue 1	Level I		14.00	0.004553	.3735	219625208.97
11E4522880	Capacitor	C111	Telcordia Issue 1	Level I		1.00	0.004553	.0267	219625208.97
1129710390	Capacitor	C126,C131,C142, C189,C190,C192, C200,C203,C509, C526	Telcordia Issue 1	Level I		10.00	0.004553	.2668	219625208.97
1124547190	Capacitor	C135,C551,C552, C553,C554,C557, C559	Telcordia Issue 1	Level I		7.00	0.004553	.1867	219625208.97
1129715090	Capacitor	C136	Telcordia Issue 1	Level I		1.00	0.004553	.0267	219625208.97
1129747090	Capacitor	C152,C502,C503, C504	Telcordia Issue 1	Level I		4.00	0.004553	.1067	219625208.97
1124410190	Capacitor	C169,C181,C201, C205,C240,C549, C550,C555	Telcordia Issue 1	Level I		8.00	0.004553	.2134	219625208.97
1129722091	Capacitor	C195,C220,C221, C222	Telcordia Issue 1	Level I		4.00	0.004553	.1067	219625208.97

### AAEON Reliability Prediction Report

**Part Number** 9697931501-D  
**Reference Des**  
**Date** 12. 3, 2009  
**Environment** GF, GU - Ground Fixed, Uncontrolled  
**Temp. (°C)** 25.20



**Description** Top-level assembly  
**File Name** GENE-9315.RPJ  
**Time** 2:04 下午  
**Failure Rate** 17.067200  
**MTBF** 58,592

Part Number	Category	Location	Calculation Model	Quality	Tem. Rise	Quantity	Failure Rate, Unit	Failure Rate, %	MTBF, Unit
1124547290	Capacitor	C213,C216,C424, C430	Telcordia Issue 1	Level I		4.00	0.004553	.1067	219625208.97
1129710090	Capacitor	C217,C218,C219, C418,C428,C505, C535	Telcordia Issue 1	Level I		7.00	0.004553	.1867	219625208.97
1124405090	Capacitor	C232,C233,C234, C235,C236,C237	Telcordia Issue 1	Level I		6.00	0.004553	.1601	219625208.97
11E1501080	Capacitor	C243	Telcordia Issue 1	Level I		1.00	0.004553	.0267	219625208.97
1129622690	Capacitor	C308	Telcordia Issue 1	Level I		1.00	0.004553	.0267	219625208.97
11E1533780	Capacitor	C458	Telcordia Issue 1	Level I		1.00	0.004553	.0267	219625208.97
1129522790	Capacitor	C527,C528,C544	Telcordia Issue 1	Level I		3.00	0.004553	.0800	219625208.97
16515A0996	Connection	DIMM1	Telcordia Issue 1	Level I		1.00	0.114989	.6737	8696501.84
1301005443	Semiconductor	D1,D21,D22,D23,D26, D39	Telcordia Issue 1	Level I		6.00	0.027319	.9604	36604201.50
1300001440	Semiconductor	D2,D3	Telcordia Issue 1	Level I		2.00	0.024019	.2815	41634486.10
1301053040	Semiconductor	D10,D4,D5,D6,D7,D8	Telcordia Issue 1	Level I		6.00	0.024019	.8444	41634486.10
1301003440	Semiconductor	D40,D9	Telcordia Issue 1	Level I		2.00	0.024019	.2815	41634486.10
1304001340	Semiconductor	D11	Telcordia Issue 1	Level I		1.00	0.004966	.0291	201349338.03
1304101340	Semiconductor	D12	Telcordia Issue 1	Level I		1.00	0.004966	.0291	201349338.03
1301005441	Semiconductor	D13,D14,D15	Telcordia Issue 1	Level I		3.00	0.027319	.4802	36604201.50
1301002240	Semiconductor	D16,D17	Telcordia Issue 1	Level I		2.00	0.024019	.2815	41634486.10
1305080040	Semiconductor	D18,D20,D24,D25, D27,D29,D35,D36, D41,D42,D43,D44	Telcordia Issue 1			12.00	0.008006	.5629	124903458.30
1301005442	Semiconductor	D19,D28,D30,D31, D32	Telcordia Issue 1	Level I		5.00	0.024019	.7036	41634486.10
1305099140	Semiconductor	D33,D34	Telcordia Issue 1	Level I		2.00	0.080062	.9382	12490345.83
1300581940	Semiconductor	D37	Telcordia Issue 1	Level I		1.00	0.080062	.4691	12490345.83
1300560040	Integrated Circuit	D38	Telcordia Issue 1	Level I		1.00	0.060240	.3530	16600154.56
1212306030	Inductor	FB1,FB10,FB19,FB23, FB24,FB25,FB26, FB27,FB3,FB31,FB32, FB33,FB34,FB35, FB36,FB37,FB39,FB4, FB40,FB41,FB42,FB6, FB7,FB9	Telcordia Issue 1	Level I		24.00	0.002277	.3201	439250417.95
12123C0007	Inductor	FB2,FB5	Telcordia Issue 1	Level I		2.00	0.002277	.0267	439250417.95
1212306035	Inductor	FB11,FB12,FB13, FB14,FB15,FB16, FB17,FB18,FB43, FB44,FB45	Telcordia Issue 1	Level I		11.00	0.002277	.1467	439250417.95
121230603Z	Inductor	FB20,FB21,FB22	Telcordia Issue 1	Level I		3.00	0.002277	.0400	439250417.95
12123C0006	Inductor	FB28,FB29	Telcordia Issue 1	Level I		2.00	0.002277	.0267	439250417.95
12123B0006	Inductor	FB30	Telcordia Issue 1	Level I		1.00	0.002277	.0133	439250417.95

### AAEON Reliability Prediction Report

**Part Number** 9697931501-D  
**Reference Des**  
**Date** 12. 3, 2009  
**Environment** GF, GU - Ground Fixed, Uncontrolled  
**Temp. (°C)** 25.20



**Description** Top-level assembly  
**File Name** GENE-9315.RPJ  
**Time** 2:04 下午  
**Failure Rate** 17.067200  
**MTBF** 58,592

Part Number	Category	Location	Calculation Model	Quality	Tem. Rise	Quantity	Failure Rate, Unit	Failure Rate, %	MTBF, Unit
1752001601	Miscellaneous	FS1,FS2	Telcordia Issue 1	Level I		2.00	0.003000	.0352	333333333.33
121110156A	Inductor	L1	Telcordia Issue 1	Level I		1.00	0.086511	.5069	11559221.52
121110156A	Inductor	L6	Telcordia Issue 1	Level I	24.70	1.00	0.135186	.7921	7397210.42
121110100P	Inductor	L10,L2	Telcordia Issue 1	Level I		2.00	0.086511	1.0138	11559221.52
1211100102	Inductor	L11,L3	Telcordia Issue 1	Level I		2.00	0.086511	1.0138	11559221.52
121110226C	Inductor	L4,L5	Telcordia Issue 1	Level I		2.00	0.086511	1.0138	11559221.52
121110226C	Inductor	L7	Telcordia Issue 1	Level I	25.30	1.00	0.136544	.8000	7323642.05
1212308054	Inductor	L9	Telcordia Issue 1	Level I		1.00	0.002277	.0133	439250417.95
1654262300	Connection	MPC11	Telcordia Issue 1	Level I		1.00	0.071293	.4177	14026615.87
1315030110	Semiconductor	Q2,Q3	Telcordia Issue 1	Level I		2.00	0.000000	.0000	.00
1315700212	Semiconductor	Q11,Q13,Q14,Q15, Q16,Q17,Q18,Q19, Q20,Q21,Q22,Q29, Q30,Q36,Q37,Q38, Q39,Q4,Q40,Q41,Q5, Q6,Q7,Q8	Telcordia Issue 1	Level I		24.00	0.080062	11.2583	12490345.83
1315230300	Semiconductor	Q9	Telcordia Issue 1	Level I		1.00	0.080062	.4691	12490345.83
1310390410	Semiconductor	Q10,Q23,Q24,Q25, Q35	Telcordia Issue 1	Level I		5.00	0.024019	.7036	41634486.10
1311390610	Semiconductor	Q12,Q28	Telcordia Issue 1	Level I		2.00	0.024019	.2815	41634486.10
1315230114	Semiconductor	Q26,Q27	Telcordia Issue 1	Level I		2.00	0.000000	.0000	.00
1311138610	Semiconductor	Q31,Q32,Q33,Q34	Telcordia Issue 1	Level I		4.00	0.024019	.5629	41634486.10
1540782282	Resistor	RP1,RP2,RP5,RP6, RP7	Telcordia Issue 1	Level I		5.00	0.012607	.3693	79323179.55
1540710280	Resistor	RP3,RP4	Telcordia Issue 1	Level I		2.00	0.006303	.0739	158646359.09
1540733085	Resistor	RP10,RP8,RP9	Telcordia Issue 1	Level I		3.00	0.006303	.1108	158646359.09
106B501032	Resistor	RT1,RT3,RT4	Telcordia Issue 1	Level I		3.00	0.002277	.0400	439250417.95
106B503331	Resistor	RT2	Telcordia Issue 1	Level I		1.00	0.011499	.0674	86965018.42
105A701009	Resistor	R1,R115,R117,R143, R149,R22,R229,R352, R39,R4,R416,R463, R55,R93,R96	Telcordia Issue 1	Level I		15.00	0.002277	.2001	439250417.95
105A700009	Resistor	R105,R122,R136, R141,R148,R152, R178,R179,R2,R20, R207,R21,R24,R277, R278,R311,R314, R330,R331,R334, R336,R339,R358, R363,R365,R366, R381,R383,R40,R445, R447,R448,R451, R490,R514,R517, R527,R90,R97	Telcordia Issue 1	Level I		39.00	0.002277	.5202	439250417.95





### AAEON Reliability Prediction Report

**Part Number** 9697931501-D  
**Reference Des**  
**Date** 12. 3, 2009  
**Environment** GF, GU - Ground Fixed, Uncontrolled  
**Temp. (°C)** 25.20



**Description** Top-level assembly  
**File Name** GENE-9315.RPJ  
**Time** 2:04 下午  
**Failure Rate** 17.067200  
**MTBF** 58,592

Part Number	Category	Location	Calculation Model	Quality	Tem. Rise	Quantity	Failure Rate, Unit	Failure Rate, %	MTBF, Unit
105A701039	Resistor	R100,R104,R119, R123,R124,R127, R128,R129,R137,R14, R144,R146,R153, R155,R159,R16,R183, R191,R219,R240, R256,R257,R261, R266,R279,R28,R284, R302,R31,R325,R338, R341,R364,R369, R370,R377,R38,R384, R414,R419,R42,R422, R423,R425,R426,	Telcordia Issue 1	Level I		62.00	0.002277	.8270	439250417.95
105A502423	Resistor	R26	Telcordia Issue 1	Level I		1.00	0.002277	.0133	439250417.95
105A700109	Resistor	R27,R32,R37,R47	Telcordia Issue 1	Level I		4.00	0.002277	.0534	439250417.95
105A700103	Resistor	R33	Telcordia Issue 1	Level I		1.00	0.002277	.0133	439250417.95
105A710039	Resistor	R193,R194,R195, R196,R197,R210, R211,R252,R253, R258,R301,R35,R380, R461,R462,R518, R524,R525	Telcordia Issue 1	Level I		18.00	0.002277	.2401	439250417.95
105A580663	Resistor	R36,R43	Telcordia Issue 1	Level I		2.00	0.002277	.0267	439250417.95
1050524904	Resistor	R255,R332,R348, R388,R44,R52	Telcordia Issue 1	Level I		6.00	0.002277	.0800	439250417.95
105A549903	Resistor	R185,R46	Telcordia Issue 1	Level I		2.00	0.002277	.0267	439250417.95
105A705609	Resistor	R102,R103,R106, R107,R110,R111, R337,R431,R433, R434,R437,R449, R459,R48,R56,R59, R62,R63,R67,R68, R71,R72,R78,R79, R83,R84,R85,R87, R88,R91,R92,R94, R95,R98,R99	Telcordia Issue 1	Level I		35.00	0.002277	.4669	439250417.95
105A702229	Resistor	R286,R295,R304, R308,R313,R429,R49, R50,R523,R75,R76, R89	Telcordia Issue 1	Level I		12.00	0.002277	.1601	439250417.95
105A554969	Resistor	R351,R413,R438,R58	Telcordia Issue 1	Level I		4.00	0.002277	.0534	439250417.95
105A708229	Resistor	R324,R371,R373, R375,R378,R379, R385,R401,R407, R411,R443,R74,R81	Telcordia Issue 1	Level I		13.00	0.002277	.1734	439250417.95

**AAEON Reliability Prediction Report**

**Part Number** 9697931501-D  
**Reference Des**  
**Date** 12. 3, 2009  
**Environment** GF, GU - Ground Fixed, Uncontrolled  
**Temp. (°C)** 25.20



**Description** Top-level assembly  
**File Name** GENE-9315.RPJ  
**Time** 2:04 下午  
**Failure Rate** 17.067200  
**MTBF** 58,592

Part Number	Category	Location	Calculation Model	Quality	Tem. Rise	Quantity	Failure Rate, Unit	Failure Rate, %	MTBF, Unit
105A710053	Resistor	R118,R318,R428	Telcordia Issue 1	Level I		3.00	0.013660	.2401	73208402.99
105A506823	Resistor	R125,R126,R275, R309	Telcordia Issue 1	Level I		4.00	0.002277	.0534	439250417.95
105A518223	Resistor	R130	Telcordia Issue 1	Level I		1.00	0.002277	.0133	439250417.95
105A530123	Resistor	R134	Telcordia Issue 1	Level I		1.00	0.002277	.0133	439250417.95
105A501333	Resistor	R135	Telcordia Issue 1	Level I		1.00	0.002277	.0133	439250417.95
105A513033	Resistor	R138,R439	Telcordia Issue 1	Level I		2.00	0.002277	.0267	439250417.95
105A702033	Resistor	R150,R186,R225, R262	Telcordia Issue 1	Level I		4.00	0.002277	.0534	439250417.95
105A701053	Resistor	R151,R233,R402, R486	Telcordia Issue 1	Level I		4.00	0.002277	.0534	439250417.95
105A704763	Resistor	R158,R192,R457	Telcordia Issue 1	Level I		3.00	0.002277	.0400	439250417.95
1059700001	Resistor	R160,R162,R247, R473	Telcordia Issue 1	Level I		4.00	0.002277	.0534	439250417.95
105A510009	Resistor	R161,R173,R180, R282,R317,R350, R356,R405,R421, R467,R468	Telcordia Issue 1	Level I		11.00	0.002277	.1467	439250417.95
105A733009	Resistor	R165,R220,R221, R390	Telcordia Issue 1	Level I		4.00	0.002277	.0534	439250417.95
105A704723	Resistor	R170	Telcordia Issue 1	Level I		1.00	0.002277	.0133	439250417.95
105A704733	Resistor	R175,R184,R202, R205,R206	Telcordia Issue 1	Level I		5.00	0.002277	.0667	439250417.95
105A501633	Resistor	R182	Telcordia Issue 1	Level I		1.00	0.002277	.0133	439250417.95
105A722033	Resistor	R187	Telcordia Issue 1	Level I		1.00	0.002277	.0133	439250417.95
105A549919	Resistor	R190,R200,R290, R495,R496,R499, R500	Telcordia Issue 1	Level I		7.00	0.002277	.0934	439250417.95
105A702433	Resistor	R198	Telcordia Issue 1	Level I		1.00	0.002277	.0133	439250417.95
105A702209	Resistor	R199,R201,R456, R529	Telcordia Issue 1	Level I		4.00	0.002277	.0534	439250417.95
105A703903	Resistor	R208,R506	Telcordia Issue 1	Level I		2.00	0.002277	.0267	439250417.95
105A515009	Resistor	R213,R215,R217, R226,R227,R228, R287,R288,R289, R305,R306,R307, R515,R516,R519, R520,R521,R522	Telcordia Issue 1	Level I		18.00	0.002277	.2401	439250417.95
105A507509	Resistor	R214,R216,R218	Telcordia Issue 1	Level I		3.00	0.002277	.0400	439250417.95
1050547004	Resistor	R222,R235,R347	Telcordia Issue 1	Level I		3.00	0.002277	.0400	439250417.95
105A501233	Resistor	R231	Telcordia Issue 1	Level I		1.00	0.002277	.0133	439250417.95
105A556213	Resistor	R246	Telcordia Issue 1	Level I		1.00	0.002277	.0133	439250417.95
105A501039	Resistor	R271,R283,R285, R291,R293,R296, R297,R298,R321	Telcordia Issue 1	Level I		9.00	0.002277	.1201	439250417.95
105A703909	Resistor	R272,R280,R393, R394,R395,R396, R397,R398,R446	Telcordia Issue 1	Level I		9.00	0.002277	.1201	439250417.95

### AAEON Reliability Prediction Report

**Part Number** 9697931501-D  
**Reference Des**  
**Date** 12. 3, 2009  
**Environment** GF, GU - Ground Fixed, Uncontrolled  
**Temp. (°C)** 25.20

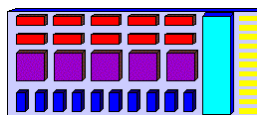


**Description** Top-level assembly  
**File Name** GENE-9315.RPJ  
**Time** 2:04 下午  
**Failure Rate** 17.067200  
**MTBF** 58,592

Part Number	Category	Location	Calculation Model	Quality	Tem. Rise	Quantity	Failure Rate, Unit	Failure Rate, %	MTBF, Unit
105A503033	Resistor	R274	Telcordia Issue 1	Level I		1.00	0.002277	.0133	439250417.95
105A501523	Resistor	R281	Telcordia Issue 1	Level I		1.00	0.002277	.0133	439250417.95
105A525503	Resistor	R292	Telcordia Issue 1	Level I		1.00	0.002277	.0133	439250417.95
105A705139	Resistor	R319,R320,R328, R329	Telcordia Issue 1	Level I		4.00	0.002277	.0534	439250417.95
105A522103	Resistor	R322,R355,R475	Telcordia Issue 1	Level I		3.00	0.002277	.0400	439250417.95
105A747039	Resistor	R327	Telcordia Issue 1	Level I		1.00	0.002277	.0133	439250417.95
105A500139	Resistor	R346,R368,R389, R420,R430,R464, R465,R466,R469, R470,R472	Telcordia Issue 1	Level I		11.00	0.002277	.1467	439250417.95
105A520003	Resistor	R357	Telcordia Issue 1	Level I		1.00	0.002277	.0133	439250417.95
105A733033	Resistor	R403	Telcordia Issue 1	Level I		1.00	0.002277	.0133	439250417.95
105A527463	Resistor	R409,R435	Telcordia Issue 1	Level I		2.00	0.002277	.0267	439250417.95
105A500239	Resistor	R424,R471,R479	Telcordia Issue 1	Level I		3.00	0.002277	.0400	439250417.95
105A514014	Resistor	R427	Telcordia Issue 1	Level I		1.00	0.002277	.0133	439250417.95
105A522663	Resistor	R444	Telcordia Issue 1	Level I		1.00	0.002277	.0133	439250417.95
105A706809	Resistor	R455	Telcordia Issue 1	Level I		1.00	0.002277	.0133	439250417.95
105A701539	Resistor	R481	Telcordia Issue 1	Level I		1.00	0.002277	.0133	439250417.95
105A502033	Resistor	R492	Telcordia Issue 1	Level I		1.00	0.002277	.0133	439250417.95
105A533223	Resistor	R497	Telcordia Issue 1	Level I		1.00	0.002277	.0133	439250417.95
105A560423	Resistor	R501	Telcordia Issue 1	Level I		1.00	0.002277	.0133	439250417.95
105A705133	Resistor	R508	Telcordia Issue 1	Level I		1.00	0.002277	.0133	439250417.95
1189622850	Capacitor	TC12,TC15,TC18,TC2, TC21,TC22,TC3,TC5	Telcordia Issue 1	Level I		8.00	0.004553	.2134	219625208.97
1189615151	Capacitor	TC19,TC28,TC31, TC32,TC4,TC6,TC7	Telcordia Issue 1	Level I		7.00	0.004553	.1867	219625208.97
1189633160	Capacitor	TC11,TC16,TC20	Telcordia Issue 1	Level I		3.00	0.004553	.0800	219625208.97
1189647180	Capacitor	TC14,TC26	Telcordia Issue 1	Level I		2.00	0.004553	.0534	219625208.97
1189647180	Capacitor	TC27	Telcordia Issue 1	Level I	21.10	1.00	0.006696	.0392	149351435.83
1189647180	Capacitor	TC17	Telcordia Issue 1	Level I	17.60	1.00	0.006303	.0369	158650349.53
1189633184	Capacitor	TC23,TC25	Telcordia Issue 1	Level I		2.00	0.004553	.0534	219625208.97
14S5A12503	Integrated Circuit	U1,U40	Telcordia Issue 1	Level I		2.00	0.060240	.7059	16600154.56
14S2048800	Integrated Circuit	U2	Telcordia Issue 1	Level I	25.60	1.00	0.181774	1.0650	5501346.82
14S5A73200	Integrated Circuit	U3	Telcordia Issue 1	Level I		1.00	0.026492	.1552	37747235.50
1315662210	Semiconductor	U4	Telcordia Issue 1	Level I		1.00	0.080062	.4691	12490345.83
1315889611	Semiconductor	U5	Telcordia Issue 1	Level I		1.00	0.080062	.4691	12490345.83
1315889611	Semiconductor	U52	Telcordia Issue 1	Level I	21.70	1.00	0.143075	.8383	6989351.40
14S4878100	Integrated Circuit	U6	Telcordia Issue 1	Level I	19.50	1.00	0.077584	.4546	12889216.15

### AAEON Reliability Prediction Report

**Part Number** 9697931501-D  
**Reference Des**  
**Date** 12. 3, 2009  
**Environment** GF, GU - Ground Fixed, Uncontrolled  
**Temp. (°C)** 25.20



**Description** Top-level assembly  
**File Name** GENE-9315.RPJ  
**Time** 2:04 下午  
**Failure Rate** 17.067200  
**MTBF** 58,592

Part Number	Category	Location	Calculation Model	Quality	Tem. Rise	Quantity	Failure Rate, Unit	Failure Rate, %	MTBF, Unit
14S4963500	Integrated Circuit	U7	Telcordia Issue 1	Level I	18.10	1.00	0.209561	1.2279	4771873.54
14S6340222	Integrated Circuit	U9	Telcordia Issue 1	Level I		1.00	0.023281	.1364	42953700.06
14S4294503	Integrated Circuit	U10	Telcordia Issue 1	Level I	24.00	1.00	0.097598	.5718	10246078.67
14S5A00821	Integrated Circuit	U11,U60	Telcordia Issue 1	Level I		2.00	0.026492	.3104	37747235.50
14S3050100	Integrated Circuit	U12	Telcordia Issue 1	Level I	29.80	1.00	0.436008	2.5547	2293534.80
1315970211	Semiconductor	U13,U17,U25	Telcordia Issue 1	Level I		3.00	0.160124	2.8146	6245172.92
14S428010D	Integrated Circuit	U14	Telcordia Issue 1	Level I	19.10	1.00	0.075994	.4453	13158994.97
14S4160020	Integrated Circuit	U15	Telcordia Issue 1	Level I	27.20	1.00	0.114457	.6706	8736937.04
14S2041500	Integrated Circuit	U16	Telcordia Issue 1	Level I	21.50	1.00	0.260720	1.5276	3835525.12
14S6308001	Integrated Circuit	U18,U19	Telcordia Issue 1	Level I		2.00	0.036411	.4267	27464308.42
14S2045400	Integrated Circuit	U20	Telcordia Issue 1	Level I	23.80	1.00	0.301448	1.7662	3317324.97
14S3524701	Integrated Circuit	U21	Telcordia Issue 1	Level I		1.00	0.060240	.3530	16600154.56
14S1564201	Integrated Circuit	U22	Telcordia Issue 1	Level I	24.70	1.00	0.318885	1.8684	3135926.24
14S4825740	Integrated Circuit	U23	Telcordia Issue 1	Level I		1.00	0.026492	.1552	37747235.50
14S4825740	Integrated Circuit	U24	Telcordia Issue 1	Level I	19.80	1.00	0.078796	.4617	12690951.29
1315446310	Semiconductor	U26	Telcordia Issue 1	Level I	24.40	1.00	0.152954	.8962	6537892.63
1315446310	Semiconductor	U27	Telcordia Issue 1	Level I		1.00	0.080062	.4691	12490345.83
1315667910	Semiconductor	U28,U34	Telcordia Issue 1	Level I		2.00	0.160124	1.8764	6245172.92
14S2200900	Integrated Circuit	U29	Telcordia Issue 1	Level I	21.60	1.00	0.262382	1.5373	3811230.21
14S5A12506	Integrated Circuit	U30	Telcordia Issue 1	Level I		1.00	0.026492	.1552	37747235.50
1315662810	Semiconductor	U31	Telcordia Issue 1	Level I		1.00	0.080062	.4691	12490345.83
14S4048503	Integrated Circuit	U32,U35	Telcordia Issue 1	Level I		2.00	0.060240	.7059	16600154.56
14S4021301	Integrated Circuit	U36,U41,U42,U46	Telcordia Issue 1	Level I		4.00	0.060240	1.4118	16600154.56
14S3128421	Integrated Circuit	U37	Telcordia Issue 1	Level I		1.00	0.060240	.3530	16600154.56
14S5A00700	Integrated Circuit	U38	Telcordia Issue 1	Level I		1.00	0.025544	.1497	39148724.51
14S5A00601	Integrated Circuit	U39	Telcordia Issue 1	Level I		1.00	0.026492	.1552	37747235.50
14S4730802	Integrated Circuit	U43	Telcordia Issue 1	Level I	20.70	1.00	0.247763	1.4517	4036117.54
14S9811500	Integrated Circuit	U44	Telcordia Issue 1	Level I		1.00	0.060240	.3530	16600154.56
14S5912300	Integrated Circuit	U45	Telcordia Issue 1	Level I		1.00	0.026492	.1552	37747235.50
14S2591200	Integrated Circuit	U47	Telcordia Issue 1	Level I		1.00	0.060240	.3530	16600154.56
14S4195710	Integrated Circuit	U49	Telcordia Issue 1	Level I		1.00	0.060240	.3530	16600154.56
1315494410	Semiconductor	U50,U51	Telcordia Issue 1	Level I		2.00	0.080062	.9382	12490345.83
14S3524700	Integrated Circuit	U53	Telcordia Issue 1	Level I		1.00	0.060240	.3530	16600154.56
1315668012	Semiconductor	U54	Telcordia Issue 1	Level I		1.00	0.024019	.1407	41634486.10
14S3065500	Integrated Circuit	U55	Telcordia Issue 1	Level I	19.10	1.00	0.223575	1.3100	4472771.00
1315669000	Semiconductor	U56,U57,U59	Telcordia Issue 1	Level I		3.00	0.080062	1.4073	12490345.83

### AAEON Reliability Prediction Report

**Part Number** 9697931501-D  
**Reference Des**  
**Date** 12. 3, 2009  
**Environment** GF, GU - Ground Fixed, Uncontrolled  
**Temp. (°C)** 25.20



**Description** Top-level assembly  
**File Name** GENE-9315.RPJ  
**Time** 2:04 下午  
**Failure Rate** 17.067200  
**MTBF** 58,592

Part Number	Category	Location	Calculation Model	Quality	Tem. Rise	Quantity	Failure Rate, Unit	Failure Rate, %	MTBF, Unit
1315669000	Semiconductor	U58	Telcordia Issue 1	Level I	17.50	1.00	0.128667	.7539	7771995.86
123131435B	Miscellaneous	Y1,Y3	Telcordia Issue 1	Level I		2.00	0.150000	1.7578	6666666.67
1231332721	Miscellaneous	Y2	Telcordia Issue 1	Level I		1.00	0.150000	.8789	6666666.67
1231325058	Miscellaneous	Y4,Y5	Telcordia Issue 1	Level I		2.00	0.150000	1.7578	6666666.67
11E2510060	Capacitor	C157,C210,C525, C534	Telcordia Issue 1	Level I		4.00	0.004553	.1067	219625208.97
1654926900	Connection	CN32B	Telcordia Issue 1	Level I		1.00	0.029897	.1752	33448084.01
105A519123	Resistor	R502	Telcordia Issue 1	Level I		1.00	0.002277	.0133	439250417.95
121110226E	Inductor	L8	Telcordia Issue 1	Level I	22.20	1.00	0.129619	.7595	7714893.73
14S4650601	Integrated Circuit	U33	Telcordia Issue 1	Level I		1.00	0.060240	.3530	16600154.56
1315700310	Semiconductor	Q1	Telcordia Issue 1	Level I		1.00	0.080062	.4691	12490345.83
1212306033	Inductor	FB38	Telcordia Issue 1	Level I		1.00	0.002277	.0133	439250417.95
1189633193	Capacitor	TC1,TC10,TC13,TC29, TC30,TC9	Telcordia Issue 1	Level I		6.00	0.004553	.1601	219625208.97
14S6201601	Integrated Circuit	U8	Telcordia Issue 1	Level I		1.00	0.170218	.9973	5874808.30
11E9622050	Capacitor	C159,C341,C342, C461,C478,C480, C483	Telcordia Issue 1	Level I		7.00	0.004553	.1867	219625208.97
1653900034	Connection	CFD1	Telcordia Issue 1	Level I		1.00	0.013799	.0808	72470848.68
1655306020	Connection	CN25	Telcordia Issue 1	Level I		1.00	0.086242	.5053	11595335.79
1655003023	Connection	CN1	Telcordia Issue 1	Level I		1.00	0.043121	.2527	23190671.58
1655902030	Connection	BAT1	Telcordia Issue 1	Level I		1.00	0.001150	.0067	869650184.19
175011901C	Miscellaneous	BAT1	Telcordia Issue 1	Level I		1.00	0.900000	5.2733	11111111.11
1655003022	Connection	CN1	Telcordia Issue 1	Level I		1.00	0.001725	.0101	579766789.46
1655909031	Connection	CN5,CN6,CN9	Telcordia Issue 1	Level I		3.00	0.005174	.0910	193255596.49
1655905032	Connection	CN11,CN13,CN14, CN15	Telcordia Issue 1	Level I		4.00	0.022998	.5390	43482509.21
1655305020	Connection	CN16,CN18	Telcordia Issue 1	Level I		2.00	0.002875	.0337	347860073.68
165320520L	Connection	CN17	Telcordia Issue 1	Level I		1.00	0.005749	.0337	173930036.84
1655306023	Connection	CN19	Telcordia Issue 1	Level I		1.00	0.003450	.0202	289883394.73
1654907006	Connection	CN20	Telcordia Issue 1	Level I		1.00	0.004025	.0236	248471481.20
1652602105	Connection	CN21	Telcordia Issue 1	Level I		1.00	0.001150	.0067	869650184.19
165251420B	Connection	CN22,CN23	Telcordia Issue 1	Level I		2.00	0.001150	.0135	869650184.19
1654808309	Connection	CN24	Telcordia Issue 1	Level I		1.00	0.001150	.0067	869650184.19
1653207209	Connection	CN26	Telcordia Issue 1	Level I		1.00	0.008049	.0472	124235740.60
1655003010	Connection	CN28	Telcordia Issue 1	Level I		1.00	0.001725	.0101	579766789.46
1654409106	Connection	CN31	Telcordia Issue 1	Level I		1.00	0.001150	.0067	869650184.19
1181627191	Capacitor	EC1	Telcordia Issue 1	Level I		1.00	0.004553	.0267	219625208.97
1653003201	Connection	JP1,JP2(JP3)	Telcordia Issue 1	Level I		2.00	0.001150	.0135	869650184.19
1653300107	Connection	JP1(5-6),JP4(2-3), JP5(2-3)	Telcordia Issue 1	Level I		3.00	0.001150	.0202	869650184.19

