

GENE-9455

Reliability Prediction Report (MTBF)

Report NO : 09E070002

02-27-2009

Issue Date

Wenyuan Yang

Manager

Jessica Chou

Test Engineer

Reliability Prediction (MTBF)

I . **Model Name:** TF-GENE-9455-A10

II . **Prediction Date:** Feb. 27, 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: 23.8 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-GENE-9455-A10:
Failure Rate: 14.079372 ppm
MTBF: 71,026 Hours

AAEON Reliability Prediction Report

Part Number 9697945507-D
Reference Des
Date 02. 27, 2009
Environment GF, GU - Ground Fixed, Uncontrolled
Temp. (°C) 23.80



Description Top-level assembly
File Name GENE-9455.RPJ
Time 7:23 下午
Failure Rate 14.079372
MTBF 71,026

| Assembly Name | Part Number | Model | Method | Environment | Duty Cycle | Qty | Failure Rate | MTBF |
|------------------|--------------|-----------|-----------------|------------------------|------------|------|--------------|--------|
| TF-GENE-9455-A10 | 9697945507-D | Telcordia | Method I Case 3 | GF, GU - Ground Fixed, | 100.00 | 1.00 | 14.079372 | 71,026 |

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Description Top-level assembly
File Name GENE-9455.RPJ
Time 7:23 下午
Failure Rate 14.079372
MTBF 71,026

| Part Number | Category | Location | Calculation Model | Quality | Tem. Rise | Failure Rate, Unit | Quantity | Failure Rate, % | Failure Rate | MTBF, Unit |
|-------------|------------|--|-------------------|---------|-----------|--------------------|----------|-----------------|--------------|--------------|
| 105A510733 | Resistor | R411 | Telcordia Issue 1 | Level I | | 0.002215 | 1.00 | .0157 | 0.002215 | 451509106.91 |
| 165392521G | Connection | CFD1 | Telcordia Issue 1 | Level I | | 0.026713 | 1.00 | .1897 | 0.026713 | 37435427.82 |
| 1214309000 | Inductor | CH1,CH2,CH3,CH4 | Telcordia Issue 1 | Level I | | 0.002215 | 4.00 | .0629 | 0.008859 | 451509106.91 |
| 16540E0201 | Connection | CN2 | Telcordia Issue 1 | Level I | | 0.074795 | 1.00 | .5312 | 0.074795 | 13369795.65 |
| 165322220J | Connection | CN6 | Telcordia Issue 1 | Level I | | 0.021370 | 1.00 | .1518 | 0.021370 | 46794284.77 |
| 1653204208 | Connection | CN10 | Telcordia Issue 1 | Level I | | 0.004274 | 1.00 | .0304 | 0.004274 | 233971423.87 |
| 1654030003 | Connection | CN13 | Telcordia Issue 1 | Level I | | 0.016028 | 1.00 | .1138 | 0.016028 | 62392379.70 |
| 165320520G | Connection | CN16,CN17,CN18, CN20,CN9 | Telcordia Issue 1 | Level I | | 0.005343 | 5.00 | .1897 | 0.026713 | 187177139.09 |
| 1174522180 | Capacitor | CP1,CP2,CP3,CP4, CP5,CP6,CP7,CP8, CP9 | Telcordia Issue 1 | Level I | | 0.005423 | 9.00 | .3466 | 0.048805 | 184407256.20 |
| 1124410190 | Capacitor | C1,C4,C5,C6,C7,C9 | Telcordia Issue 1 | Level I | | 0.004430 | 6.00 | .1888 | 0.026578 | 225754553.46 |
| 11B2701690 | Capacitor | C104,C105,C106, C107,C111,C112, C113,C114,C115, C119,C12,C121,C122, C123,C124,C125, C126,C127,C128, C130,C132,C139, C142,C143,C146, C148,C149,C15,C150, C151,C152,C158,C16, C160,C161,C166, C169,C17,C176,C18, C181,C185,C188, | Telcordia Issue 1 | Level I | | 0.004430 | 263.00 | 8.2744 | 1.164982 | 225754553.46 |
| 11E9501091 | Capacitor | C11,C163,C164,C168, C177,C178,C182, C189,C205,C206, C207,C208,C209, C213,C214,C218, C229,C230,C231, C232,C233,C234, C235,C242,C243, C244,C245,C268, C269,C292,C293, C432,C443,C461,C48, C511,C513,C517, C519,C521,C523, | Telcordia Issue 1 | Level I | | 0.004430 | 52.00 | 1.6360 | 0.230339 | 225754553.46 |
| 1124522880 | Capacitor | C14,C265 | Telcordia Issue 1 | Level I | | 0.005423 | 2.00 | .0770 | 0.010846 | 184407256.20 |

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File Name GENE-9455.RPJ
Time 7:23 下午
Failure Rate 14.079372
MTBF 71,026

| Part Number | Category | Location | Calculation Model | Quality | Tem. Rise | Failure Rate, Unit | Quantity | Failure Rate, % | Failure Rate | MTBF, Unit |
|-------------|-----------|--|-------------------|---------|-----------|--------------------|----------|-----------------|--------------|--------------|
| 1124568280 | Capacitor | C22 | Telcordia Issue 1 | Level I | | 0.004430 | 1.00 | .0315 | 0.004430 | 225754553.46 |
| 1124547190 | Capacitor | C179,C25,C26,C27, C35,C36,C38,C73 | Telcordia Issue 1 | Level I | | 0.004430 | 8.00 | .2517 | 0.035437 | 225754553.46 |
| 1129701790 | Capacitor | C154,C156,C173,C28, C284,C29,C338,C374, C385,C388,C392, C429,C467,C490,C78 | Telcordia Issue 1 | Level I | | 0.004430 | 15.00 | .4719 | 0.066444 | 225754553.46 |
| 1129710090 | Capacitor | C157,C180,C186, C197,C32,C37,C502 | Telcordia Issue 1 | Level I | | 0.004430 | 7.00 | .2202 | 0.031007 | 225754553.46 |
| 1124405090 | Capacitor | C344,C45,C47,C55, C59,C61 | Telcordia Issue 1 | Level I | | 0.004430 | 6.00 | .1888 | 0.026578 | 225754553.46 |
| 1124427090 | Capacitor | C389,C390,C458, C459,C46,C51,C69, C95,C96,C97,C98 | Telcordia Issue 1 | Level I | | 0.004430 | 11.00 | .3461 | 0.048725 | 225754553.46 |
| 1121610060 | Capacitor | C60 | Telcordia Issue 1 | Level I | | 0.004430 | 1.00 | .0315 | 0.004430 | 225754553.46 |
| 1129715090 | Capacitor | C72 | Telcordia Issue 1 | Level I | | 0.004430 | 1.00 | .0315 | 0.004430 | 225754553.46 |
| 1129710390 | Capacitor | C118,C131,C524, C526,C548,C549,C77, C82 | Telcordia Issue 1 | Level I | | 0.004430 | 8.00 | .2517 | 0.035437 | 225754553.46 |
| 1129747090 | Capacitor | C311,C414,C84,C86, C89 | Telcordia Issue 1 | Level I | | 0.005423 | 5.00 | .1926 | 0.027114 | 184407256.20 |
| 11E9647680 | Capacitor | C100,C117,C145, C159,C165,C167, C211,C212,C258, C259,C277,C342, C395,C442,C470, C474 | Telcordia Issue 1 | Level I | | 0.004430 | 16.00 | .5034 | 0.070873 | 225754553.46 |
| 1129722680 | Capacitor | C101,C102,C116, C134,C135,C136, C175,C196 | Telcordia Issue 1 | Level I | | 0.004430 | 8.00 | .2517 | 0.035437 | 225754553.46 |
| 11E2522090 | Capacitor | C129 | Telcordia Issue 1 | Level I | | 0.004430 | 1.00 | .0315 | 0.004430 | 225754553.46 |
| 11E1547090 | Capacitor | C140 | Telcordia Issue 1 | Level I | | 0.004430 | 1.00 | .0315 | 0.004430 | 225754553.46 |
| 1124510280 | Capacitor | C174 | Telcordia Issue 1 | Level I | | 0.005423 | 1.00 | .0385 | 0.005423 | 184407256.20 |
| 1129722091 | Capacitor | C184,C190,C198, C507,C508,C509 | Telcordia Issue 1 | Level I | | 0.004430 | 6.00 | .1888 | 0.026578 | 225754553.46 |
| 1129622050 | Capacitor | C183,C194,C339, C355,C384,C424, C463 | Telcordia Issue 1 | Level I | | 0.004430 | 7.00 | .2202 | 0.031007 | 225754553.46 |
| 11B9747490 | Capacitor | C226,C264,C274, C306 | Telcordia Issue 1 | Level I | | 0.004430 | 4.00 | .1258 | 0.017718 | 225754553.46 |
| 1122722890 | Capacitor | C254,C272,C291, C298,C301,C303, C304 | Telcordia Issue 1 | Level I | | 0.005423 | 7.00 | .2696 | 0.037959 | 184407256.20 |
| 1124547290 | Capacitor | C316,C318,C322, C323,C370,C371, C400,C401 | Telcordia Issue 1 | Level I | | 0.004430 | 8.00 | .2517 | 0.035437 | 225754553.46 |
| 1124518280 | Capacitor | C404 | Telcordia Issue 1 | Level I | | 0.004430 | 1.00 | .0315 | 0.004430 | 225754553.46 |

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File Name GENE-9455.RPJ
Time 7:23 下午
Failure Rate 14.079372
MTBF 71,026

| Part Number | Category | Location | Calculation Model | Quality | Tem. Rise | Failure Rate, Unit | Quantity | Failure Rate, % | Failure Rate | MTBF, Unit |
|-------------|---------------|--|-------------------|---------|-----------|--------------------|----------|-----------------|--------------|--------------|
| 16515A0996 | Connection | DIMM1 | Telcordia Issue 1 | Level I | | 0.106851 | 1.00 | .7589 | 0.106851 | 9358856.95 |
| 1304101340 | Semiconductor | D1,D19 | Telcordia Issue 1 | Level I | | 0.004368 | 2.00 | .0620 | 0.008736 | 228948121.36 |
| 1301005443 | Semiconductor | D18,D26,D3,D33,D35, D37,D40 | Telcordia Issue 1 | Level I | | 0.026578 | 7.00 | 1.3214 | 0.186043 | 37625758.91 |
| 1305000140 | Semiconductor | D10,D11,D12,D29, D30,D31,D32,D9 | Telcordia Issue 1 | Level I | | 0.023068 | 8.00 | 1.3108 | 0.184546 | 43349713.08 |
| 1301005441 | Semiconductor | D13,D14,D24,D25, D27,D28 | Telcordia Issue 1 | Level I | | 0.026578 | 6.00 | 1.1326 | 0.159465 | 37625758.91 |
| 1300581940 | Semiconductor | D15 | Telcordia Issue 1 | Level I | | 0.076894 | 1.00 | .5461 | 0.076894 | 13004913.92 |
| 1301053040 | Semiconductor | D16,D17,D22,D23, D41,D42 | Telcordia Issue 1 | Level I | | 0.023068 | 6.00 | .9831 | 0.138409 | 43349713.08 |
| 1301002240 | Semiconductor | D34 | Telcordia Issue 1 | Level I | | 0.023068 | 1.00 | .1638 | 0.023068 | 43349713.08 |
| 1301005442 | Semiconductor | D36,D45,D46,D47 | Telcordia Issue 1 | Level I | | 0.023068 | 4.00 | .6554 | 0.092273 | 43349713.08 |
| 1305099140 | Semiconductor | D38,D39 | Telcordia Issue 1 | Level I | | 0.076894 | 2.00 | 1.0923 | 0.153788 | 13004913.92 |
| 1300001440 | Semiconductor | D43,D44 | Telcordia Issue 1 | Level I | | 0.023068 | 2.00 | .3277 | 0.046136 | 43349713.08 |
| 1212306035 | Inductor | FB1,FB2,FB4,FB5, FB6,FB7,FB8,FB9 | Telcordia Issue 1 | Level I | | 0.002215 | 8.00 | .1258 | 0.017718 | 451509106.91 |
| 1212306030 | Inductor | FB10,FB13,FB14, FB15,FB16,FB24, FB26,FB27,FB28, FB29,FB3,FB30,FB31, FB33,FB34,FB35, FB37,FB41,FB42, FB43 | Telcordia Issue 1 | Level I | | 0.002215 | 20.00 | .3146 | 0.044296 | 451509106.91 |
| 121230603Z | Inductor | FB11,FB12,FB32 | Telcordia Issue 1 | Level I | | 0.002215 | 3.00 | .0472 | 0.006644 | 451509106.91 |
| 121230603D | Inductor | FB17,FB19,FB21 | Telcordia Issue 1 | Level I | | 0.002215 | 3.00 | .0472 | 0.006644 | 451509106.91 |
| 12123C0006 | Inductor | FB18,FB20 | Telcordia Issue 1 | Level I | | 0.002215 | 2.00 | .0315 | 0.004430 | 451509106.91 |
| 12123C0007 | Inductor | FB22,FB23 | Telcordia Issue 1 | Level I | | 0.002215 | 2.00 | .0315 | 0.004430 | 451509106.91 |
| 12123B0006 | Inductor | FB36 | Telcordia Issue 1 | Level I | | 0.002215 | 1.00 | .0157 | 0.002215 | 451509106.91 |
| 1752001601 | Miscellaneous | FS1,FS3,FS5 | Telcordia Issue 1 | Level I | | 0.003000 | 3.00 | .0639 | 0.009000 | 33333333.33 |
| 1752002000 | Miscellaneous | FS4 | Telcordia Issue 1 | Level I | | 0.003000 | 1.00 | .0213 | 0.003000 | 33333333.33 |
| 121110336L | Inductor | L1,L11 | Telcordia Issue 1 | Level I | | 0.084162 | 2.00 | 1.1955 | 0.168324 | 11881818.60 |
| 121110100P | Inductor | L2,L3 | Telcordia Issue 1 | Level I | | 0.084162 | 2.00 | 1.1955 | 0.168324 | 11881818.60 |
| 1212308054 | Inductor | L5 | Telcordia Issue 1 | Level I | | 0.002215 | 1.00 | .0157 | 0.002215 | 451509106.91 |
| 121110226C | Inductor | L6,L8 | Telcordia Issue 1 | Level I | | 0.084162 | 2.00 | 1.1955 | 0.168324 | 11881818.60 |
| 121110156A | Inductor | L4,L7 | Telcordia Issue 1 | Level I | | 0.084162 | 2.00 | 1.1955 | 0.168324 | 11881818.60 |
| 1211100102 | Inductor | L10,L9 | Telcordia Issue 1 | Level I | | 0.084162 | 2.00 | 1.1955 | 0.168324 | 11881818.60 |

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Temp. (°C) 23.80



Description Top-level assembly
File Name GENE-9455.RPJ
Time 7:23 下午
Failure Rate 14.079372
MTBF 71,026

| Part Number | Category | Location | Calculation Model | Quality | Tem. Rise | Failure Rate, Unit | Quantity | Failure Rate, % | Failure Rate | MTBF, Unit |
|-------------|----------|--|-------------------|---------|-----------|--------------------|----------|-----------------|--------------|--------------|
| 105A701039 | Resistor | R113,R156,R16,R172, R220,R23,R24,R242, R243,R25,R294,R295, R298,R30,R303,R304, R307,R310,R325, R329,R33,R330,R342, R353,R354,R355, R371,R375,R377, R383,R388,R389, R391,R394,R395, R407,R424,R426, R431,R439,R443, R448,R453,R457, | Telcordia Issue 1 | Level I | | 0.002215 | 63.00 | .9910 | 0.139532 | 451509106.91 |
| 105A700103 | Resistor | R17,R170,R18,R441 | Telcordia Issue 1 | Level I | | 0.002215 | 4.00 | .0629 | 0.008859 | 451509106.91 |
| 105A705609 | Resistor | R141,R142,R144, R148,R149,R150, R183,R184,R185, R186,R187,R188, R189,R19,R190,R191, R192,R193,R194, R198,R199,R200, R201,R202,R203, R204,R205,R206, R207,R208,R209, R210,R211,R473 | Telcordia Issue 1 | Level I | | 0.002215 | 34.00 | .5348 | 0.075303 | 451509106.91 |
| 1050524904 | Resistor | R20,R268,R280,R315, R403,R445 | Telcordia Issue 1 | Level I | | 0.002215 | 6.00 | .0944 | 0.013289 | 451509106.91 |
| 105A700009 | Resistor | R105,R106,R119, R137,R153,R160, R182,R21,R216,R217, R22,R277,R296,R309, R31,R311,R32,R34, R35,R356,R363,R370, R384,R408,R44,R45, R46,R467,R474,R478, R513,R515,R517, R521,R530,R66,R95 | Telcordia Issue 1 | Level I | | 0.002215 | 37.00 | .5820 | 0.081947 | 451509106.91 |
| 105A515009 | Resistor | R103,R128,R129, R130,R131,R132, R133,R250,R259,R26, R264,R28,R367,R417, R49,R51,R88,R89 | Telcordia Issue 1 | Level I | | 0.002215 | 18.00 | .2832 | 0.039866 | 451509106.91 |

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| Part Number | Category | Location | Calculation Model | Quality | Tem. Rise | Failure Rate, Unit | Quantity | Failure Rate, % | Failure Rate | MTBF, Unit |
|-------------|----------|--|-------------------|---------|-----------|--------------------|----------|-----------------|--------------|--------------|
| 105A510009 | Resistor | R140,R147,R266, R273,R274,R291, R317,R333,R358, R396,R429,R449, R450,R527 | Telcordia Issue 1 | Level I | | 0.002215 | 14.00 | .2202 | 0.031007 | 451509106.91 |
| 105A706809 | Resistor | R143 | Telcordia Issue 1 | Level I | | 0.002215 | 1.00 | .0157 | 0.002215 | 451509106.91 |
| 105A701539 | Resistor | R146 | Telcordia Issue 1 | Level I | | 0.002215 | 1.00 | .0157 | 0.002215 | 451509106.91 |
| 105A702209 | Resistor | R151,R494,R495 | Telcordia Issue 1 | Level I | | 0.002215 | 3.00 | .0472 | 0.006644 | 451509106.91 |
| 105A554969 | Resistor | R152,R180,R281, R316 | Telcordia Issue 1 | Level I | | 0.002215 | 4.00 | .0629 | 0.008859 | 451509106.91 |
| 105A702033 | Resistor | R155,R507 | Telcordia Issue 1 | Level I | | 0.002215 | 2.00 | .0315 | 0.004430 | 451509106.91 |
| 105A703903 | Resistor | R157,R158 | Telcordia Issue 1 | Level I | | 0.002215 | 2.00 | .0315 | 0.004430 | 451509106.91 |
| 105A702229 | Resistor | R163,R164,R299, R305,R306,R380, R462,R481,R491, R492,R500,R501, R508 | Telcordia Issue 1 | Level I | | 0.002215 | 13.00 | .2045 | 0.028792 | 451509106.91 |
| 105A708223 | Resistor | R165 | Telcordia Issue 1 | Level I | | 0.002215 | 1.00 | .0157 | 0.002215 | 451509106.91 |
| 105A511333 | Resistor | R166 | Telcordia Issue 1 | Level I | | 0.002215 | 1.00 | .0157 | 0.002215 | 451509106.91 |
| 105A707533 | Resistor | R167 | Telcordia Issue 1 | Level I | | 0.002215 | 1.00 | .0157 | 0.002215 | 451509106.91 |
| 105A580663 | Resistor | R174,R175 | Telcordia Issue 1 | Level I | | 0.002215 | 2.00 | .0315 | 0.004430 | 451509106.91 |
| 105A527463 | Resistor | R181,R289 | Telcordia Issue 1 | Level I | | 0.002215 | 2.00 | .0315 | 0.004430 | 451509106.91 |
| 105A502033 | Resistor | R212 | Telcordia Issue 1 | Level I | | 0.002215 | 1.00 | .0157 | 0.002215 | 451509106.91 |
| 105A702263 | Resistor | R213,R235 | Telcordia Issue 1 | Level I | | 0.002215 | 2.00 | .0315 | 0.004430 | 451509106.91 |
| 105A700003 | Resistor | R214,R215,R219, R238,R241,R313, R314,R368,R423 | Telcordia Issue 1 | Level I | | 0.002215 | 9.00 | .1416 | 0.019933 | 451509106.91 |
| 105A500239 | Resistor | R221,R254,R257, R265 | Telcordia Issue 1 | Level I | | 0.002215 | 4.00 | .0629 | 0.008859 | 451509106.91 |
| 105A532413 | Resistor | R222 | Telcordia Issue 1 | Level I | | 0.002215 | 1.00 | .0157 | 0.002215 | 451509106.91 |
| 105A501623 | Resistor | R224 | Telcordia Issue 1 | Level I | | 0.002215 | 1.00 | .0157 | 0.002215 | 451509106.91 |
| 105A510213 | Resistor | R226 | Telcordia Issue 1 | Level I | | 0.002215 | 1.00 | .0157 | 0.002215 | 451509106.91 |
| 105A733009 | Resistor | R228,R269,R432, R528 | Telcordia Issue 1 | Level I | | 0.002215 | 4.00 | .0629 | 0.008859 | 451509106.91 |
| 105A705133 | Resistor | R233 | Telcordia Issue 1 | Level I | | 0.002215 | 1.00 | .0157 | 0.002215 | 451509106.91 |
| 105A511313 | Resistor | R234 | Telcordia Issue 1 | Level I | | 0.002215 | 1.00 | .0157 | 0.002215 | 451509106.91 |
| 105A706823 | Resistor | R245 | Telcordia Issue 1 | Level I | | 0.002215 | 1.00 | .0157 | 0.002215 | 451509106.91 |
| 105A705139 | Resistor | R246,R247,R255, R256 | Telcordia Issue 1 | Level I | | 0.002215 | 4.00 | .0629 | 0.008859 | 451509106.91 |
| 105A507509 | Resistor | R249,R252,R262 | Telcordia Issue 1 | Level I | | 0.002215 | 3.00 | .0472 | 0.006644 | 451509106.91 |

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| Part Number | Category | Location | Calculation Model | Quality | Tem. Rise | Failure Rate, Unit | Quantity | Failure Rate, % | Failure Rate | MTBF, Unit |
|-------------|--------------------|---|-------------------|---------|-----------|--------------------|----------|-----------------|--------------|--------------|
| 105A501523 | Resistor | R282 | Telcordia Issue 1 | Level I | | 0.002215 | 1.00 | .0157 | 0.002215 | 451509106.91 |
| 105A525503 | Resistor | R283 | Telcordia Issue 1 | Level I | | 0.002215 | 1.00 | .0157 | 0.002215 | 451509106.91 |
| 105A522103 | Resistor | R293,R319,R525 | Telcordia Issue 1 | Level I | | 0.002215 | 3.00 | .0472 | 0.006644 | 451509106.91 |
| 105A549919 | Resistor | R297,R365,R393, R400,R422,R428, R446 | Telcordia Issue 1 | Level I | | 0.002215 | 7.00 | .1101 | 0.015504 | 451509106.91 |
| 105A501633 | Resistor | R301 | Telcordia Issue 1 | Level I | | 0.002215 | 1.00 | .0157 | 0.002215 | 451509106.91 |
| 105A518223 | Resistor | R302 | Telcordia Issue 1 | Level I | | 0.002215 | 1.00 | .0157 | 0.002215 | 451509106.91 |
| 105A520003 | Resistor | R320 | Telcordia Issue 1 | Level I | | 0.002215 | 1.00 | .0157 | 0.002215 | 451509106.91 |
| 1050547004 | Resistor | R332,R341,R347, R468 | Telcordia Issue 1 | Level I | | 0.002215 | 4.00 | .0629 | 0.008859 | 451509106.91 |
| 105A501223 | Resistor | R343 | Telcordia Issue 1 | Level I | | 0.002215 | 1.00 | .0157 | 0.002215 | 451509106.91 |
| 105A503033 | Resistor | R349 | Telcordia Issue 1 | Level I | | 0.002215 | 1.00 | .0157 | 0.002215 | 451509106.91 |
| 105A506823 | Resistor | R350,R351 | Telcordia Issue 1 | Level I | | 0.002215 | 2.00 | .0315 | 0.004430 | 451509106.91 |
| 105A551113 | Resistor | R398 | Telcordia Issue 1 | Level I | | 0.002215 | 1.00 | .0157 | 0.002215 | 451509106.91 |
| 105A502833 | Resistor | R404 | Telcordia Issue 1 | Level I | | 0.002215 | 1.00 | .0157 | 0.002215 | 451509106.91 |
| 105A501233 | Resistor | R406 | Telcordia Issue 1 | Level I | | 0.002215 | 1.00 | .0157 | 0.002215 | 451509106.91 |
| 105A512033 | Resistor | R430 | Telcordia Issue 1 | Level I | | 0.002215 | 1.00 | .0157 | 0.002215 | 451509106.91 |
| 105A568123 | Resistor | R436 | Telcordia Issue 1 | Level I | | 0.002215 | 1.00 | .0157 | 0.002215 | 451509106.91 |
| 1189615151 | Capacitor | TC1,TC12,TC15,TC19, TC22,TC24,TC26, TC29,TC4 | Telcordia Issue 1 | Level I | | 0.004430 | 9.00 | .2832 | 0.039866 | 225754553.46 |
| 1189922180 | Capacitor | TC18,TC2,TC25,TC7, TC8 | Telcordia Issue 1 | Level I | | 0.004430 | 5.00 | .1573 | 0.022148 | 225754553.46 |
| 1189647180 | Capacitor | TC14,TC3,TC5,TC6 | Telcordia Issue 1 | Level I | | 0.004430 | 4.00 | .1258 | 0.017718 | 225754553.46 |
| 1189633160 | Capacitor | TC11,TC13,TC16, TC20,TC21,TC9 | Telcordia Issue 1 | Level I | | 0.004430 | 6.00 | .1888 | 0.026578 | 225754553.46 |
| 1189647184 | Capacitor | TC10 | Telcordia Issue 1 | Level I | | 0.004430 | 1.00 | .0315 | 0.004430 | 225754553.46 |
| 1189633181 | Capacitor | TC27,TC28 | Telcordia Issue 1 | Level I | | 0.004430 | 2.00 | .0629 | 0.008859 | 225754553.46 |
| 1315992601 | Semiconductor | U1 | Telcordia Issue 1 | Level I | | 0.153788 | 1.00 | 1.0923 | 0.153788 | 6502456.96 |
| 14S2303700 | Integrated Circuit | U2 | Telcordia Issue 1 | Level I | | 0.054357 | 1.00 | .3861 | 0.054357 | 18396772.35 |
| 14S6201601 | Integrated Circuit | U3 | Telcordia Issue 1 | Level I | 19.30 | 0.795665 | 1.00 | 5.6513 | 0.795665 | 1256809.92 |
| 14S428010D | Integrated Circuit | U4 | Telcordia Issue 1 | Level I | 17.10 | 0.063589 | 1.00 | .4516 | 0.063589 | 15725943.75 |
| 14S4825740 | Integrated Circuit | U5 | Telcordia Issue 1 | Level I | | 0.024392 | 1.00 | .1732 | 0.024392 | 40996628.62 |
| 14S4825740 | Integrated Circuit | U7 | Telcordia Issue 1 | Level I | 14.90 | 0.056546 | 1.00 | .4016 | 0.056546 | 17684589.38 |
| 14S5A00700 | Integrated Circuit | U6 | Telcordia Issue 1 | Level I | | 0.023519 | 1.00 | .1670 | 0.023519 | 42518761.92 |

AAEON Reliability Prediction Report

Part Number 9697945507-D
Reference Des
Date 02. 27, 2009
Environment GF, GU - Ground Fixed, Uncontrolled
Temp. (°C) 23.80



Description Top-level assembly
File Name GENE-9455.RPJ
Time 7:23 下午
Failure Rate 14.079372
MTBF 71,026

| Part Number | Category | Location | Calculation Model | Quality | Tem. Rise | Failure Rate, Unit | Quantity | Failure Rate, % | Failure Rate | MTBF, Unit |
|-------------|--------------------|-----------------|-------------------|---------|-----------|--------------------|----------|-----------------|--------------|-------------|
| 14S3050100 | Integrated Circuit | U8 | Telcordia Issue 1 | Level I | | 0.054357 | 1.00 | .3861 | 0.054357 | 18396772.35 |
| 14S4878100 | Integrated Circuit | U9 | Telcordia Issue 1 | Level I | 16.50 | 0.061596 | 1.00 | .4375 | 0.061596 | 16234873.23 |
| 14S3524700 | Integrated Circuit | U10 | Telcordia Issue 1 | Level I | | 0.054357 | 1.00 | .3861 | 0.054357 | 18396772.35 |
| 14S2045400 | Integrated Circuit | U11 | Telcordia Issue 1 | Level I | | 0.054357 | 1.00 | .3861 | 0.054357 | 18396772.35 |
| 1315889611 | Semiconductor | U12,U19,U20,U37 | Telcordia Issue 1 | Level I | | 0.076894 | 4.00 | 2.1846 | 0.307576 | 13004913.92 |
| 14S4294503 | Integrated Circuit | U13 | Telcordia Issue 1 | Level I | 8.10 | 0.038921 | 1.00 | .2764 | 0.038921 | 25693002.65 |
| 14S4160020 | Integrated Circuit | U14 | Telcordia Issue 1 | Level I | 7.20 | 0.036997 | 1.00 | .2628 | 0.036997 | 27028936.55 |
| 14S2200900 | Integrated Circuit | U15 | Telcordia Issue 1 | Level I | | 0.054357 | 1.00 | .3861 | 0.054357 | 18396772.35 |
| 14S2041700 | Integrated Circuit | U16 | Telcordia Issue 1 | Level I | | 0.024392 | 1.00 | .1732 | 0.024392 | 40996628.62 |
| 1315441014 | Semiconductor | U17 | Telcordia Issue 1 | Level I | | 0.076894 | 1.00 | .5461 | 0.076894 | 13004913.92 |
| 14S4653700 | Integrated Circuit | U18 | Telcordia Issue 1 | Level I | | 0.054357 | 1.00 | .3861 | 0.054357 | 18396772.35 |
| 14S4021301 | Integrated Circuit | U22,U27,U32,U33 | Telcordia Issue 1 | Level I | | 0.054357 | 4.00 | 1.5443 | 0.217429 | 18396772.35 |
| 1315668012 | Semiconductor | U23 | Telcordia Issue 1 | Level I | | 0.023068 | 1.00 | .1638 | 0.023068 | 43349713.08 |
| 14S2591200 | Integrated Circuit | U24 | Telcordia Issue 1 | Level I | | 0.054357 | 1.00 | .3861 | 0.054357 | 18396772.35 |
| 14S5A12503 | Integrated Circuit | U25 | Telcordia Issue 1 | Level I | | 0.054357 | 1.00 | .3861 | 0.054357 | 18396772.35 |
| 14S4730701 | Integrated Circuit | U26 | Telcordia Issue 1 | Level I | 21.00 | 0.230894 | 1.00 | 1.6399 | 0.230894 | 4330988.02 |
| 14S4048502 | Integrated Circuit | U28,U29 | Telcordia Issue 1 | Level I | | 0.054357 | 2.00 | .7722 | 0.108715 | 18396772.35 |
| 14S5A00600 | Integrated Circuit | U30 | Telcordia Issue 1 | Level I | | 0.023519 | 1.00 | .1670 | 0.023519 | 42518761.92 |
| 14S5A12506 | Integrated Circuit | U31,U51 | Telcordia Issue 1 | Level I | | 0.024392 | 2.00 | .3465 | 0.048784 | 40996628.62 |
| 1315970211 | Semiconductor | U34,U44 | Telcordia Issue 1 | Level I | | 0.153788 | 2.00 | 2.1846 | 0.307576 | 6502456.96 |
| 14S6308001 | Integrated Circuit | U35,U39 | Telcordia Issue 1 | Level I | | 0.032855 | 2.00 | .4667 | 0.065710 | 30436742.49 |
| 14S3387201 | Integrated Circuit | U36 | Telcordia Issue 1 | Level I | | 0.054357 | 1.00 | .3861 | 0.054357 | 18396772.35 |
| 14S5A00821 | Integrated Circuit | U38 | Telcordia Issue 1 | Level I | | 0.024392 | 1.00 | .1732 | 0.024392 | 40996628.62 |
| 14S3156500 | Semiconductor | U40 | Telcordia Issue 1 | Level I | 22.10 | 0.083724 | 1.00 | .5947 | 0.083724 | 11944023.69 |
| 14S3065500 | Integrated Circuit | U46 | Telcordia Issue 1 | Level I | 16.40 | 0.171010 | 1.00 | 1.2146 | 0.171010 | 5847603.83 |
| 1315993311 | Semiconductor | U47 | Telcordia Issue 1 | Level I | | 0.153788 | 1.00 | 1.0923 | 0.153788 | 6502456.96 |
| 14S4081110 | Integrated Circuit | U48,U49 | Telcordia Issue 1 | Level I | | 0.054357 | 2.00 | .7722 | 0.108715 | 18396772.35 |
| 1231332721 | Miscellaneous | Y1 | Telcordia Issue 1 | Level I | | 0.150000 | 1.00 | 1.0654 | 0.150000 | 6666666.67 |
| 123131435B | Miscellaneous | Y2 | Telcordia Issue 1 | Level I | | 0.150000 | 1.00 | 1.0654 | 0.150000 | 6666666.67 |
| 1231325058 | Miscellaneous | Y3,Y4 | Telcordia Issue 1 | Level I | | 0.150000 | 2.00 | 2.1308 | 0.300000 | 6666666.67 |
| 1231324555 | Miscellaneous | Y5 | Telcordia Issue 1 | Level I | | 0.150000 | 1.00 | 1.0654 | 0.150000 | 6666666.67 |

AAEON Reliability Prediction Report

Part Number 9697945507-D
Reference Des
Date 02. 27, 2009
Environment GF, GU - Ground Fixed, Uncontrolled
Temp. (°C) 23.80



Description Top-level assembly
File Name GENE-9455.RPJ
Time 7:23 下午
Failure Rate 14.079372
MTBF 71,026

| Part Number | Category | Location | Calculation Model | Quality | Tem. Rise | Failure Rate, Unit | Quantity | Failure Rate, % | Failure Rate | MTBF, Unit |
|-------------|--------------------|--|-------------------|---------|-----------|--------------------|----------|-----------------|--------------|--------------|
| 1122710091 | Capacitor | C120,C141 | Telcordia Issue 1 | Level I | | 0.004430 | 2.00 | .0629 | 0.008859 | 225754553.46 |
| 11B9710050 | Capacitor | C10,C13,C138,C2, C204,C225,C227, C256,C270,C275, C276,C279,C280, C281,C285,C3,C30, C308,C313,C332, C333,C343,C350, C354,C377,C383, C391,C415,C423, C425,C43,C446,C462, C464,C486,C49,C492, C531,C532,C538, C541,C543,C556, | Telcordia Issue 1 | Level I | | 0.004430 | 47.00 | 1.4787 | 0.208191 | 225754553.46 |
| 11E9510050 | Capacitor | C109,C110,C144, C153,C155,C187, C199,C200,C201, C202,C203,C210, C236,C237,C238, C239,C240,C247, C248,C527 | Telcordia Issue 1 | Level I | | 0.004430 | 20.00 | .6292 | 0.088592 | 225754553.46 |
| 1315662810 | Semiconductor | U19,U20,U50 | Telcordia Issue 1 | Level I | | 0.076894 | 3.00 | 1.6384 | 0.230682 | 13004913.92 |
| 1315662210 | Semiconductor | U21 | Telcordia Issue 1 | Level I | | 0.076894 | 1.00 | .5461 | 0.076894 | 13004913.92 |
| 11B2701080 | Capacitor | C103,C108 | Telcordia Issue 1 | Level I | | 0.004430 | 2.00 | .0629 | 0.008859 | 225754553.46 |
| 1305002041 | Semiconductor | D21 | Telcordia Issue 1 | Level I | | 0.153788 | 1.00 | 1.0923 | 0.153788 | 6502456.96 |
| 165300420L | Connection | CN21 | Telcordia Issue 1 | Level I | | 0.004274 | 1.00 | .0304 | 0.004274 | 233971423.87 |
| 11E9610190 | Capacitor | C278 | Telcordia Issue 1 | Level I | | 0.004430 | 1.00 | .0315 | 0.004430 | 225754553.46 |
| 11E1622060 | Capacitor | C397,C481 | Telcordia Issue 1 | Level I | | 0.004430 | 2.00 | .0629 | 0.008859 | 225754553.46 |
| 105A501129 | Resistor | R540 | Telcordia Issue 1 | Level I | | 0.002215 | 1.00 | .0157 | 0.002215 | 451509106.91 |
| 14S4195710 | Integrated Circuit | U52,U53 | Telcordia Issue 1 | Level I | | 0.054357 | 2.00 | .7722 | 0.108715 | 18396772.35 |
| 105A542213 | Resistor | R544 | Telcordia Issue 1 | Level I | | 0.002215 | 1.00 | .0157 | 0.002215 | 451509106.91 |
| 1121733780 | Capacitor | C563 | Telcordia Issue 1 | Level I | | 0.005423 | 1.00 | .0385 | 0.005423 | 184407256.20 |
| 1121747780 | Capacitor | C564 | Telcordia Issue 1 | Level I | | 0.004430 | 1.00 | .0315 | 0.004430 | 225754553.46 |
| 1129522790 | Capacitor | C91 | Telcordia Issue 1 | Level I | | 0.004430 | 1.00 | .0315 | 0.004430 | 225754553.46 |
| 105A595323 | Resistor | R168 | Telcordia Issue 1 | Level I | | 0.002215 | 1.00 | .0157 | 0.002215 | 451509106.91 |
| 105A701529 | Resistor | R270 | Telcordia Issue 1 | Level I | | 0.002215 | 1.00 | .0157 | 0.002215 | 451509106.91 |
| 105A703329 | Resistor | R271 | Telcordia Issue 1 | Level I | | 0.002215 | 1.00 | .0157 | 0.002215 | 451509106.91 |

AAEON Reliability Prediction Report

Part Number 9697945507-D
Reference Des
Date 02. 27, 2009
Environment GF, GU - Ground Fixed, Uncontrolled
Temp. (°C) 23.80



Description Top-level assembly
File Name GENE-9455.RPJ
Time 7:23 下午
Failure Rate 14.079372
MTBF 71,026

| Part Number | Category | Location | Calculation Model | Quality | Tem. Rise | Failure Rate, Unit | Quantity | Failure Rate, % | Failure Rate | MTBF, Unit |
|-------------|---------------|----------------------|-------------------|---------|-----------|--------------------|----------|-----------------|--------------|--------------|
| 105A700109 | Resistor | R321,R322,R323, R324 | Telcordia Issue 1 | Level I | | 0.002215 | 4.00 | .0629 | 0.008859 | 451509106.91 |
| 175011901G | Miscellaneous | BAT1 | Telcordia Issue 1 | Level I | | 0.900000 | 1.00 | 6.3923 | 0.900000 | 1111111.11 |
| 1652602104 | Connection | CN23 | Telcordia Issue 1 | Level I | | 0.021370 | 1.00 | .1518 | 0.021370 | 46794284.77 |
| 1654430301 | Connection | CN19 | Telcordia Issue 1 | Level I | | 0.016028 | 1.00 | .1138 | 0.016028 | 62392379.70 |
| 1655902030 | Connection | BAT1 | Telcordia Issue 1 | Level I | | 0.001069 | 1.00 | .0076 | 0.001069 | 935885695.47 |
| 1653207209 | Connection | CN1 | Telcordia Issue 1 | Level I | | 0.007480 | 1.00 | .0531 | 0.007480 | 133697956.50 |
| 1655306023 | Connection | CN3 | Telcordia Issue 1 | Level I | | 0.003206 | 1.00 | .0228 | 0.003206 | 311961898.49 |
| 1654808304 | Connection | CN4 | Telcordia Issue 1 | Level I | | 0.001069 | 1.00 | .0076 | 0.001069 | 935885695.47 |
| 1652514209 | Connection | CN7,CN8 | Telcordia Issue 1 | Level I | | 0.007480 | 2.00 | .1062 | 0.014959 | 133697956.50 |
| 1653005201 | Connection | JP2 | Telcordia Issue 1 | Level I | | 0.005343 | 1.00 | .0379 | 0.005343 | 187177139.09 |
| 1654907006 | Connection | CN11,CN12 | Telcordia Issue 1 | Level I | | 0.003740 | 2.00 | .0531 | 0.007480 | 267395912.99 |
| 1655305020 | Connection | CN14 | Telcordia Issue 1 | Level I | | 0.002671 | 1.00 | .0190 | 0.002671 | 374354278.19 |
| 1654409103 | Connection | CN15 | Telcordia Issue 1 | Level I | | 0.120207 | 1.00 | .8538 | 0.120207 | 8318983.96 |
| 1655003010 | Connection | CN25 | Telcordia Issue 1 | Level I | | 0.001603 | 1.00 | .0114 | 0.001603 | 623923796.98 |
| 1655004011 | Connection | CN26 | Telcordia Issue 1 | Level I | | 0.021370 | 1.00 | .1518 | 0.021370 | 46794284.77 |
| 1653003101 | Connection | JP1,JP4,JP5 | Telcordia Issue 1 | Level I | | 0.001603 | 3.00 | .0342 | 0.004808 | 623923796.98 |
| 1653003201 | Connection | JP6 | Telcordia Issue 1 | Level I | | 0.001069 | 1.00 | .0076 | 0.001069 | 935885695.47 |
| 175910000B | Miscellaneous | SP1 | Telcordia Issue 1 | Level I | | 0.150000 | 1.00 | 1.0654 | 0.150000 | 6666666.67 |