

# GENE-QM57

## Reliability Prediction Report (MTBF)

Summary	Failure Rate: 14.496737 ppm MTBF: 68,981 Hours
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Issue date	Approval	Test Engineer
2011/07/20	Jansin Lee	Rex Chang

# Reliability Prediction (MTBF)

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**I . Model Name:** GENE-QM57-A03

**II . Prediction Date:** July. 20, 2011

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

**IV . Predicted by:** Rex Chang

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

## **VI. Simulation Environment:**

- Temperature: 26.0 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:

GENE-QM57-A03:

- Failure Rate: 14.496737 ppm
- MTBF: 68,981 Hours

### AAEON Reliability Prediction Report

**Part Number** 9697QM5741-D  
**Reference Des**  
**Date** 07. 20, 2011  
**Environment** GF, GU - Ground Fixed, Uncontrolled  
**Temp. (°C)** 26.00

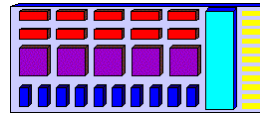


**Description** Top-level assembly  
**File Name** GENE-QM57-A03.RPJ  
**Time** 9:33  
**Failure Rate** 14.496737  
**MTBF** 68,981

Assembly Name	Part Number	Model	Method	Environment	Duty Cycle	Qty	Failure Rate	MTBF
GENE-QM57-A03	9697QM5741-D	Telcordia Issue 1	Method I Case 3	GF, GU - Ground Fixed, Uncontrolled	100.00	1.00	14.50	68981.04

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**Time** 9:33  
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**MTBF** 68,981

Part Number	Category	Location	Calculation Model	Quality	Tem. Rise	Quantity	Failure Rate, Unit	Failure Rate, %	MTBF, Unit
1214309008	Inductor	CH1,CH2,CH3,CH4, CH5,CH6,CH7,CH8	Telcordia Issue 1	Level I		8.00	0.002312	.1276	432445530.49
16515A099Q	Connection	CN1	Telcordia Issue 1	Level I		1.00	0.014385	.0992	69515442.63
1654030003	Connection	CN7	Telcordia Issue 1	Level I		1.00	0.029969	.2067	33367412.46
1653924110	Connection	CN11	Telcordia Issue 1	Level I		1.00	0.029969	.2067	33367412.46
1655906033	Connection	CN25	Telcordia Issue 1	Level I		1.00	0.029969	.2067	33367412.46
165321020B	Connection	CN32	Telcordia Issue 1	Level I		1.00	0.029969	.2067	33367412.46
1174522180	Capacitor	CP1,CP2,CP3,CP6, CP7	Telcordia Issue 1	Level I		5.00	0.005501	.1897	181774505.62
1129610080	Capacitor	C104,C150,C154, C159,C22,C23,C230, C232,C24,C25,C26, C27,C28,C29,C3,C30, C31,C326,C33,C338, C35,C36,C37,C38, C39,C4,C40,C422, C43,C480,C481,C485, C486,C49,C5,C532, C6,C63,C64,C69,C7, C85,C86,C87,C88, C89,C90	Telcordia Issue 1	Level I		47.00	0.004625	1.4994	216222765.25
11E9622050	Capacitor	C10,C11,C12,C122, C13,C14,C15,C157, C16,C17,C174,C178, C18,C19,C20,C21, C32,C34,C41,C42, C59,C60,C61,C62, C65,C66,C67,C68, C70,C75,C76,C8,C9	Telcordia Issue 1	Level I		33.00	0.004625	1.0528	216222765.25
11E9501091	Capacitor	C103,C108,C113, C151,C160,C161, C162,C163,C164, C170,C171,C175, C177,C182,C183, C186,C187,C188, C189,C195,C203, C241,C247,C295, C296,C297,C298, C299,C302,C305, C330,C340,C428, C433,C437,C44,C45, C482,C494,C495,	Telcordia Issue 1	Level I		61.00	0.004625	1.9461	216222765.25
11E2522090	Capacitor	C46,C47,C507,C546, C547,C557,C558, C574	Telcordia Issue 1	Level I		8.00	0.004625	.2552	216222765.25



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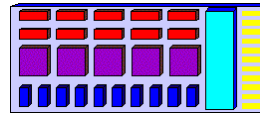


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11E9510050	Capacitor	C234,C237,C244, C245,C252,C257, C294,C311,C314, C318,C345,C348, C354,C366,C372, C388,C393,C404, C411,C470,C471, C489,C490,C491, C493,C579,C586, C618	Telcordia Issue 1	Level I		28.00	0.004625	.8933	216222765.25
11C1501080	Capacitor	C259,C550	Telcordia Issue 1	Level I		2.00	0.004625	.0638	216222765.25
1124410191	Capacitor	C292,C293,C300, C301,C303,C304, C309,C590,C623	Telcordia Issue 1	Level I		9.00	0.004625	.2871	216222765.25
1129622050	Capacitor	C347,C358,C377	Telcordia Issue 1	Level I		3.00	0.004625	.0957	216222765.25
1124547190	Capacitor	C379,C381,C382	Telcordia Issue 1	Level I		3.00	0.004625	.0957	216222765.25
11C9501050	Capacitor	C421	Telcordia Issue 1	Level I		1.00	0.004625	.0319	216222765.25
1124468090	Capacitor	C434	Telcordia Issue 1	Level I		1.00	0.004625	.0319	216222765.25
11C2510480	Capacitor	C472,C501,C513, C528,C543,C549, C554,C555,C559, C573	Telcordia Issue 1	Level I		10.00	0.004625	.3190	216222765.25
1189615151	Capacitor	C483,TC10,TC11,TC5, TC6,TC7,TC8,TC9	Telcordia Issue 1	Level I		8.00	0.004625	.2552	216222765.25
11C1522480	Capacitor	C492,C497,C505, C508,C520,C533, C541,C552,C563, C564	Telcordia Issue 1	Level I		10.00	0.004625	.3190	216222765.25
1124515281	Capacitor	C510	Telcordia Issue 1	Level I		1.00	0.004625	.0319	216222765.25
1124539180	Capacitor	C512,C534,C535	Telcordia Issue 1	Level I		3.00	0.004625	.0957	216222765.25
11C4533180	Capacitor	C515	Telcordia Issue 1	Level I		1.00	0.004625	.0319	216222765.25
1124533190	Capacitor	C517,C519	Telcordia Issue 1	Level I		2.00	0.004625	.0638	216222765.25
1129722091	Capacitor	C525	Telcordia Issue 1	Level I		1.00	0.004625	.0319	216222765.25
11A4422180	Capacitor	C526	Telcordia Issue 1	Level I		1.00	0.004625	.0319	216222765.25
1121533480	Capacitor	C538,C600	Telcordia Issue 1	Level I		2.00	0.004625	.0638	216222765.25
11C2568880	Capacitor	C539	Telcordia Issue 1	Level I		1.00	0.004625	.0319	216222765.25
11C4433880	Capacitor	C544	Telcordia Issue 1	Level I		1.00	0.004625	.0319	216222765.25
11E2647650	Capacitor	C551	Telcordia Issue 1	Level I		1.00	0.004625	.0319	216222765.25
11C1522650	Capacitor	C584,C594,C607	Telcordia Issue 1	Level I		3.00	0.004625	.0957	216222765.25
11C2539290	Capacitor	C593	Telcordia Issue 1	Level I		1.00	0.004625	.0319	216222765.25
11E2510060	Capacitor	C596	Telcordia Issue 1	Level I		1.00	0.004625	.0319	216222765.25
1305099140	Semiconductor	D4,D5	Telcordia Issue 1	Level I		2.00	0.081916	1.1301	12207573.09

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**Time** 9:33  
**Failure Rate** 14.496737  
**MTBF** 68,981

Part Number	Category	Location	Calculation Model	Quality	Tem. Rise	Quantity	Failure Rate, Unit	Failure Rate, %	MTBF, Unit
1301005443	Semiconductor	D20,D6,D7	Telcordia Issue 1	Level I		3.00	0.024575	.5086	40691910.29
1301013041	Semiconductor	D8	Telcordia Issue 1	Level I		1.00	0.024575	.1695	40691910.29
1305080040	Semiconductor	D10,D11,D12,D13, D14,D15,D16,D17, D19,D21,D22,D23, D24,D29,D30,D39, D40,D41,D42,D43, D44,D45,D46,D47,D9	Telcordia Issue 1	Level I		25.00	0.046249	7.9757	21622276.52
1304300140	Semiconductor	D18	Telcordia Issue 1	Level I		1.00	0.005342	.0368	187200330.10
1301005444	Semiconductor	D1,D2,D25,D31	Telcordia Issue 1	Level I		4.00	0.024575	.6781	40691910.29
1301005441	Semiconductor	D33	Telcordia Issue 1	Level I		1.00	0.024575	.1695	40691910.29
1301005442	Semiconductor	D38	Telcordia Issue 1	Level I		1.00	0.024575	.1695	40691910.29
12123C0007	Inductor	FB1	Telcordia Issue 1	Level I		1.00	0.002312	.0160	432445530.49
1212306030	Inductor	FB12,FB13,FB14, FB15,FB16,FB17, FB18,FB2,FB20,FB23, FB3,FB30,FB31,FB32, FB33,FB34,FB4,FB5, FB6,FB7,FB8,FB9	Telcordia Issue 1	Level I		22.00	0.002312	.3509	432445530.49
1212306035	Inductor	FB24,FB25,FB26, FB27,FB28,FB29	Telcordia Issue 1	Level I		6.00	0.002312	.0957	432445530.49
1752001601	Miscellaneous	FS1,FS2	Telcordia Issue 1	Level I		2.00	0.003000	.0414	333333333.33
1752000501	Miscellaneous	FS3	Telcordia Issue 1	Level I		1.00	0.003000	.0207	333333333.33
1304101340	Semiconductor	LED1	Telcordia Issue 1	Level I		1.00	0.005342	.0368	187200330.10
1304001340	Semiconductor	LED2	Telcordia Issue 1	Level I		1.00	0.005342	.0368	187200330.10
1211100160	Inductor	L1	Telcordia Issue 1	Level I		1.00	0.087872	.6062	11380145.54
121110100F	Inductor	L3,L4	Telcordia Issue 1	Level I		2.00	0.087872	1.2123	11380145.54
12123C0005	Inductor	L5,L6,L7	Telcordia Issue 1	Level I		3.00	0.002312	.0479	432445530.49
121230603S	Inductor	L8	Telcordia Issue 1	Level I		1.00	0.002312	.0160	432445530.49
121110106G	Inductor	L10,L18	Telcordia Issue 1	Level I		2.00	0.087872	1.2123	11380145.54
1211103672	Inductor	L12	Telcordia Issue 1	Level I	18.00	3.00	0.122285	2.5306	8177649.63
1211103672	Inductor	L13	Telcordia Issue 1	Level I	35.40	3.00	0.162712	3.3672	6145820.12
1211103672	Inductor	L14	Telcordia Issue 1	Level I		3.00	0.087872	1.8185	11380145.54
121110226J	Inductor	L15	Telcordia Issue 1	Level I		1.00	0.087872	.6062	11380145.54
121110156K	Inductor	L16	Telcordia Issue 1	Level I	23.70	1.00	0.134735	.9294	7421958.53
1211105676	Inductor	L17	Telcordia Issue 1	Level I		1.00	0.087872	.6062	11380145.54
1654926900	Connection	PCIE1A1-2	Telcordia Issue 1	Level I		1.00	0.014385	.0992	69515442.63
1315230511	Semiconductor	Q13,Q16,Q3	Telcordia Issue 1	Level I		3.00	0.000000	.0000	.00



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Part Number	Category	Location	Calculation Model	Quality	Tem. Rise	Quantity	Failure Rate, Unit	Failure Rate, %	MTBF, Unit
1315700216	Semiconductor	Q10,Q11,Q14,Q15, Q17,Q18,Q29,Q30, Q32,Q33,Q4,Q45,Q46, Q48,Q49,Q5,Q57,Q6, Q60,Q61,Q66,Q68, Q69,Q7,Q72,Q73,Q74, Q76,Q77,Q80,Q81, Q83,Q84,Q9	Telcordia Issue 1	Level I		34.00	0.000000	.0000	.00
1311390612	Semiconductor	Q28,Q8,Q85	Telcordia Issue 1	Level I		3.00	0.081916	1.6952	12207573.09
1310390413	Semiconductor	Q21,Q25,Q31,Q50, Q67,Q71,Q86	Telcordia Issue 1	Level I		7.00	0.081916	3.9555	12207573.09
1311138610	Semiconductor	Q23,Q24	Telcordia Issue 1	Level I		2.00	0.081916	1.1301	12207573.09
1315482110	Semiconductor	Q37,Q38,Q51,Q52, U46,U47	Telcordia Issue 1	Level I		6.00	0.081916	3.3904	12207573.09
1315441012	Semiconductor	Q44,Q47,Q65,Q70	Telcordia Issue 1	Level I		4.00	0.081916	2.2603	12207573.09
1315050311	Semiconductor	Q53	Telcordia Issue 1	Level I	35.00	2.00	0.000000	.0000	.00
1315050311	Semiconductor	Q55	Telcordia Issue 1	Level I		2.00	0.000000	.0000	.00
1315R30310	Semiconductor	Q54	Telcordia Issue 1	Level I	34.80	2.00	0.000000	.0000	.00
1315R30310	Semiconductor	Q56	Telcordia Issue 1	Level I		2.00	0.000000	.0000	.00
1315482410	Semiconductor	Q58,Q59,U49,U53	Telcordia Issue 1	Level I		4.00	0.000000	.0000	.00
1315667910	Semiconductor	Q64,U56,U59	Telcordia Issue 1	Level I		3.00	0.000000	.0000	.00
1540710382	Resistor	RP1	Telcordia Issue 1	Level I		1.00	0.006537	.0451	152970720.28
1540782282	Resistor	RP13,RP2,RP3,RP4, RP5,RP6	Telcordia Issue 1	Level I		6.00	0.006537	.2706	152970720.28
1540700081	Resistor	RP7	Telcordia Issue 1	Level I		1.00	0.006537	.0451	152970720.28
1540733085	Resistor	RP14,RP18,RP19	Telcordia Issue 1	Level I		3.00	0.006537	.1353	152970720.28
1540710280	Resistor	RP15,RP16,RP20	Telcordia Issue 1	Level I		3.00	0.006537	.1353	152970720.28
106B501032	Resistor	RT1,RT2,RT3,RT4, RT6	Telcordia Issue 1	Level I		5.00	0.002312	.0798	432445530.49
106B747030	Resistor	RT5	Telcordia Issue 1	Level I		1.00	0.002312	.0160	432445530.49
105A549969	Resistor	R1,R167,R30,R33, R34	Telcordia Issue 1	Level I		5.00	0.002312	.0798	432445530.49
105A575003	Resistor	R2,R22	Telcordia Issue 1	Level I		2.00	0.002312	.0319	432445530.49

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105A700009	Resistor	R109,R110,R115, R116,R118,R119,R12, R13,R14,R16,R174, R176,R178,R179,R18, R180,R182,R19,R196, R20,R205,R206,R208, R217,R230,R281, R285,R293,R294,R3, R302,R306,R314, R374,R375,R377, R378,R386,R387, R389,R392,R394, R397,R4,R40,R40	Telcordia Issue 1	Level I		104.00	0.002312	1.6589	432445530.49
105A501039	Resistor	R10,R102,R107,R108, R11,R111,R112,R117, R121,R122,R123, R124,R125,R126, R127,R129,R131, R184,R186,R188, R191,R193,R194, R203,R204,R216, R225,R226,R227, R228,R232,R233, R234,R235,R237, R239,R240,R242, R243,R245,R246,	Telcordia Issue 1	Level I		72.00	0.002312	1.1485	432445530.49
105A505109	Resistor	R15,R28,R620	Telcordia Issue 1	Level I		3.00	0.002312	.0479	432445530.49
105A700139	Resistor	R100,R152,R17,R280, R317,R369,R403, R411,R416,R417, R419,R422,R424, R425,R427,R430, R446,R475,R479, R484,R499,R510, R625,R626,R627, R630,R631,R637, R639,R641,R642, R662,R665,R707, R712,R72,R721,R746, R763,R795,R806	Telcordia Issue 1	Level I		41.00	0.002312	.6540	432445530.49
105A501523	Resistor	R21	Telcordia Issue 1	Level I		1.00	0.002312	.0160	432445530.49
105A501123	Resistor	R27,R624	Telcordia Issue 1	Level I		2.00	0.002312	.0319	432445530.49



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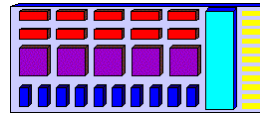


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105A702229	Resistor	R128,R130,R132, R133,R134,R135, R195,R197,R198, R255,R256,R266, R267,R268,R271, R275,R276,R277, R278,R442,R444, R450,R451,R465, R519,R681,R682, R762	Telcordia Issue 1	Level I		28.00	0.002312	.4466	432445530.49
1050702734	Resistor	R148,R316	Telcordia Issue 1	Level I		2.00	0.002312	.0319	432445530.49
105A710009	Resistor	R149	Telcordia Issue 1	Level I		1.00	0.002312	.0160	432445530.49
1050551004	Resistor	R151	Telcordia Issue 1	Level I		1.00	0.002312	.0160	432445530.49
105A701039	Resistor	R154,R185,R190, R259,R295,R296, R311,R381,R382, R383,R423,R426, R448,R503,R680, R733,R744,R796, R800,R801,R802, R803,R805	Telcordia Issue 1	Level I		23.00	0.002312	.3669	432445530.49
105A708229	Resistor	R175,R189	Telcordia Issue 1	Level I		2.00	0.002312	.0319	432445530.49
105A523713	Resistor	R199	Telcordia Issue 1	Level I		1.00	0.002312	.0160	432445530.49
105A515009	Resistor	R200,R201,R202, R260,R261,R262, R407,R409,R410, R429,R432,R434	Telcordia Issue 1	Level I		12.00	0.002312	.1914	432445530.49
1050510034	Resistor	R209,R222,R223, R287,R289,R290, R291,R307,R310, R457,R485,R539, R553,R555,R568, R569,R572,R610, R693,R697,R700, R724,R731	Telcordia Issue 1	Level I		23.00	0.002312	.3669	432445530.49
105A532463	Resistor	R212	Telcordia Issue 1	Level I		1.00	0.002312	.0160	432445530.49
105A522663	Resistor	R215	Telcordia Issue 1	Level I		1.00	0.002312	.0160	432445530.49
105A705609	Resistor	R238	Telcordia Issue 1	Level I		1.00	0.002312	.0160	432445530.49
105A554963	Resistor	R241	Telcordia Issue 1	Level I		1.00	0.002312	.0160	432445530.49
105A701009	Resistor	R257,R258,R592, R596,R602	Telcordia Issue 1	Level I		5.00	0.002312	.0798	432445530.49
105A507509	Resistor	R263,R264,R265	Telcordia Issue 1	Level I		3.00	0.002312	.0479	432445530.49
1050547004	Resistor	R299,R500,R502, R797,R798	Telcordia Issue 1	Level I		5.00	0.002312	.0798	432445530.49
105A502423	Resistor	R301	Telcordia Issue 1	Level I		1.00	0.002312	.0160	432445530.49

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**Date** 07. 20, 2011  
**Environment** GF, GU - Ground Fixed, Uncontrolled  
**Temp. (°C)** 26.00



**Description** Top-level assembly  
**File Name** GENE-QM57-A03.RPJ  
**Time** 9:33  
**Failure Rate** 14.496737  
**MTBF** 68,981

Part Number	Category	Location	Calculation Model	Quality	Tem. Rise	Quantity	Failure Rate, Unit	Failure Rate,%	MTBF, Unit
105A733009	Resistor	R349,R372,R373, R533,R534	Telcordia Issue 1	Level I		5.00	0.002312	.0798	432445530.49
1050505124	Resistor	R360,R677,R750	Telcordia Issue 1	Level I		3.00	0.002312	.0479	432445530.49
105A503309	Resistor	R364,R365,R366, R367,R368,R412, R467,R488,R522, R718,R742	Telcordia Issue 1	Level I		11.00	0.002312	.1755	432445530.49
105A700103	Resistor	R406,R646,R653	Telcordia Issue 1	Level I		3.00	0.002312	.0479	432445530.49
1059700001	Resistor	R413	Telcordia Issue 1	Level I		1.00	0.002312	.0160	432445530.49
105A549919	Resistor	R414,R415,R418	Telcordia Issue 1	Level I		3.00	0.002312	.0479	432445530.49
105A710039	Resistor	R476,R743,R745, R755,R761	Telcordia Issue 1	Level I		5.00	0.002312	.0798	432445530.49
105A747039	Resistor	R483	Telcordia Issue 1	Level I		1.00	0.002312	.0160	432445530.49
105A705139	Resistor	R508,R509	Telcordia Issue 1	Level I		2.00	0.002312	.0319	432445530.49
105A506823	Resistor	R527,R529	Telcordia Issue 1	Level I		2.00	0.002312	.0319	432445530.49
105A503033	Resistor	R528,R766,R773	Telcordia Issue 1	Level I		3.00	0.002312	.0479	432445530.49
105A702263	Resistor	R574,R579	Telcordia Issue 1	Level I		2.00	0.002312	.0319	432445530.49
1059704761	Resistor	R575	Telcordia Issue 1	Level I		1.00	0.002312	.0160	432445530.49
1050519114	Resistor	R576	Telcordia Issue 1	Level I		1.00	0.002312	.0160	432445530.49
105A556203	Resistor	R584	Telcordia Issue 1	Level I		1.00	0.002312	.0160	432445530.49
105A541233	Resistor	R585	Telcordia Issue 1	Level I		1.00	0.002312	.0160	432445530.49
105A573213	Resistor	R587	Telcordia Issue 1	Level I		1.00	0.002312	.0160	432445530.49
105A536513	Resistor	R588	Telcordia Issue 1	Level I		1.00	0.002312	.0160	432445530.49
105A580613	Resistor	R589,R605	Telcordia Issue 1	Level I		2.00	0.002312	.0319	432445530.49
105A582563	Resistor	R590,R623	Telcordia Issue 1	Level I		2.00	0.002312	.0319	432445530.49
105A526113	Resistor	R591	Telcordia Issue 1	Level I		1.00	0.002312	.0160	432445530.49
105A501133	Resistor	R593,R621	Telcordia Issue 1	Level I		2.00	0.002312	.0319	432445530.49
105A501529	Resistor	R595	Telcordia Issue 1	Level I		1.00	0.002312	.0160	432445530.49
1050582514	Resistor	R597	Telcordia Issue 1	Level I		1.00	0.002312	.0160	432445530.49
105A593103	Resistor	R601	Telcordia Issue 1	Level I		1.00	0.002312	.0160	432445530.49
105A503323	Resistor	R603	Telcordia Issue 1	Level I		1.00	0.002312	.0160	432445530.49
105A512423	Resistor	R606	Telcordia Issue 1	Level I		1.00	0.002312	.0160	432445530.49
105A549903	Resistor	R611	Telcordia Issue 1	Level I		1.00	0.002312	.0160	432445530.49
105A540213	Resistor	R616	Telcordia Issue 1	Level I		1.00	0.002312	.0160	432445530.49
105A514733	Resistor	R617	Telcordia Issue 1	Level I		1.00	0.002312	.0160	432445530.49
105A515413	Resistor	R618	Telcordia Issue 1	Level I		1.00	0.002312	.0160	432445530.49
105A533213	Resistor	R647,R654	Telcordia Issue 1	Level I		2.00	0.002312	.0319	432445530.49
105A510523	Resistor	R648,R652	Telcordia Issue 1	Level I		2.00	0.002312	.0319	432445530.49
105A704733	Resistor	R599,R672,R678, R692	Telcordia Issue 1	Level I		4.00	0.002312	.0638	432445530.49
105A701823	Resistor	R673	Telcordia Issue 1	Level I		1.00	0.002312	.0160	432445530.49

### AAEON Reliability Prediction Report

**Part Number** 9697QM5741-D  
**Reference Des**  
**Date** 07. 20, 2011  
**Environment** GF, GU - Ground Fixed, Uncontrolled  
**Temp. (°C)** 26.00



**Description** Top-level assembly  
**File Name** GENE-QM57-A03.RPJ  
**Time** 9:33  
**Failure Rate** 14.496737  
**MTBF** 68,981

Part Number	Category	Location	Calculation Model	Quality	Tem. Rise	Quantity	Failure Rate, Unit	Failure Rate, %	MTBF, Unit
105A501233	Resistor	R679	Telcordia Issue 1	Level I		1.00	0.002312	.0160	432445530.49
105A705623	Resistor	R683	Telcordia Issue 1	Level I		1.00	0.002312	.0160	432445530.49
105A703323	Resistor	R695	Telcordia Issue 1	Level I		1.00	0.002312	.0160	432445530.49
105A700233	Resistor	R703,R710	Telcordia Issue 1	Level I		2.00	0.002312	.0319	432445530.49
105A501413	Resistor	R723	Telcordia Issue 1	Level I		1.00	0.002312	.0160	432445530.49
1050507530	Resistor	R748,R749	Telcordia Issue 1	Level I		2.00	0.002312	.0319	432445530.49
1050505164	Resistor	R751	Telcordia Issue 1	Level I		1.00	0.002312	.0160	432445530.49
105A507533	Resistor	R753	Telcordia Issue 1	Level I		1.00	0.002312	.0160	432445530.49
105A510223	Resistor	R754	Telcordia Issue 1	Level I		1.00	0.002312	.0160	432445530.49
105A520033	Resistor	R757	Telcordia Issue 1	Level I		1.00	0.002312	.0160	432445530.49
1050547034	Resistor	R765,R772	Telcordia Issue 1	Level I		2.00	0.002312	.0319	432445530.49
105A548713	Resistor	R768,R775	Telcordia Issue 1	Level I		2.00	0.002312	.0319	432445530.49
105A501033	Resistor	R769,R776	Telcordia Issue 1	Level I		2.00	0.002312	.0319	432445530.49
1189633160	Capacitor	TC1,TC12,TC13,TC15,TC17,TC18,TC2,TC20,TC21,TC23,TC24,TC25,TC26,TC27, TC28,TC3,TC4	Telcordia Issue 1	Level I		17.00	0.004625	.5423	216222765.25
1189633193	Capacitor	TC14,TC31,TC32, TC33,TC34	Telcordia Issue 1	Level I		5.00	0.004625	.1595	216222765.25
14S4BD8200	Integrated Circuit	U2	Telcordia Issue 1	Level I	26.60	1.00	0.115590	.7974	8651263.29
14S5A00821	Integrated Circuit	U3,U4,U5,U69,U9	Telcordia Issue 1	Level I		5.00	0.027762	.9575	36019927.89
14S2200900	Integrated Circuit	U6	Telcordia Issue 1	Level I		1.00	0.063856	.4405	15660198.22
14S3524700	Integrated Circuit	U8	Telcordia Issue 1	Level I		1.00	0.027762	.1915	36019927.89
14S2591200	Integrated Circuit	U52	Telcordia Issue 1	Level I	18.20	1.00	0.222137	1.5323	4501735.53
1315970211	Semiconductor	U18,U19,U20,U21	Telcordia Issue 1	Level I		4.00	0.081916	2.2603	12207573.09
14S3088800	Integrated Circuit	U22	Telcordia Issue 1	Level I	25.10	1.00	0.107323	.7403	9317648.97
14S4963500	Integrated Circuit	U23	Telcordia Issue 1	Level I		1.00	0.027762	.1915	36019927.89
14S634022E	Integrated Circuit	U24	Telcordia Issue 1	Level I		1.00	0.024678	.1702	40521517.74
14S4257701	Integrated Circuit	U25	Telcordia Issue 1	Level I		1.00	0.027762	.1915	36019927.89
14S4825740	Integrated Circuit	U26	Telcordia Issue 1	Level I		1.00	0.027762	.1915	36019927.89
14S6308002	Integrated Circuit	U27	Telcordia Issue 1	Level I		1.00	0.024678	.1702	40521517.74
14S3058500	Integrated Circuit	U28	Telcordia Issue 1	Level I		1.00	0.063856	.4405	15660198.22
14S4871204	Integrated Circuit	U30	Telcordia Issue 1	Level I		1.00	0.027762	.1915	36019927.89
14S9811500	Integrated Circuit	U31	Telcordia Issue 1	Level I		1.00	0.027762	.1915	36019927.89
14S5912300	Integrated Circuit	U32	Telcordia Issue 1	Level I		1.00	0.027762	.1915	36019927.89
14S4021301	Integrated Circuit	U33,U35	Telcordia Issue 1	Level I		2.00	0.063856	.8810	15660198.22
14S5A12503	Integrated Circuit	U36,U39	Telcordia Issue 1	Level I		2.00	0.027762	.3830	36019927.89
14S5A12506	Integrated Circuit	U37	Telcordia Issue 1	Level I		1.00	0.027762	.1915	36019927.89

### AAEON Reliability Prediction Report

**Part Number** 9697QM5741-D  
**Reference Des**  
**Date** 07. 20, 2011  
**Environment** GF, GU - Ground Fixed, Uncontrolled  
**Temp. (°C)** 26.00



**Description** Top-level assembly  
**File Name** GENE-QM57-A03.RPJ  
**Time** 9:33  
**Failure Rate** 14.496737  
**MTBF** 68,981

Part Number	Category	Location	Calculation Model	Quality	Tem. Rise	Quantity	Failure Rate, Unit	Failure Rate, %	MTBF, Unit
14S4048503	Integrated Circuit	U38,U41	Telcordia Issue 1	Level I		2.00	0.027762	.3830	36019927.89
14S5A00601	Integrated Circuit	U40	Telcordia Issue 1	Level I		1.00	0.027762	.1915	36019927.89
14S4288100	Integrated Circuit	U50	Telcordia Issue 1	Level I		1.00	0.027762	.1915	36019927.89
14S4288200	Integrated Circuit	U51	Telcordia Issue 1	Level I		1.00	0.027762	.1915	36019927.89
14S3111600	Integrated Circuit	U54	Telcordia Issue 1	Level I		1.00	0.027762	.1915	36019927.89
14S2362400	Integrated Circuit	U57	Telcordia Issue 1	Level I		1.00	0.063856	.4405	15660198.22
1315422410	Semiconductor	U58	Telcordia Issue 1	Level I		1.00	0.081916	.5651	12207573.09
14S5800801	Integrated Circuit	U60,U61	Telcordia Issue 1	Level I		2.00	0.027762	.3830	36019927.89
14S5A73200	Integrated Circuit	U62	Telcordia Issue 1	Level I		1.00	0.027762	.1915	36019927.89
14S4195710	Integrated Circuit	U63	Telcordia Issue 1	Level I		1.00	0.063856	.4405	15660198.22
1315446310	Semiconductor	U75,U76	Telcordia Issue 1	Level I		2.00	0.081916	1.1301	12207573.09
14S2321900	Integrated Circuit	U77	Telcordia Issue 1	Level I		1.00	0.063856	.4405	15660198.22
14S3121800	Integrated Circuit	U78,U79	Telcordia Issue 1	Level I		2.00	0.063856	.8810	15660198.22
1231332721	Miscellaneous	Y1	Telcordia Issue 1	Level I		1.00	0.150000	1.0347	6666666.67
123132505D	Miscellaneous	Y2,Y4,Y5	Telcordia Issue 1	Level I		3.00	0.150000	3.1041	6666666.67
123131435J	Miscellaneous	Y6	Telcordia Issue 1	Level I		1.00	0.150000	1.0347	6666666.67
14S9341101	Integrated Circuit	U44,U7	Telcordia Issue 1	Level I		2.00	0.027762	.3830	36019927.89
11E1522680	Capacitor	C80,C82,C84	Telcordia Issue 1	Level I		3.00	0.004625	.0957	216222765.25
11A4422190	Capacitor	C598	Telcordia Issue 1	Level I		1.00	0.004625	.0319	216222765.25
105A518733	Resistor	R759	Telcordia Issue 1	Level I		1.00	0.002312	.0160	432445530.49
1653005202	Connection	CN21	Telcordia Issue 1	Level I		1.00	0.023975	.1654	41709265.58
14S6206402	Integrated Circuit	U43	Telcordia Issue 1	Level I		1.00	0.024678	.1702	40521517.74
1651609882	Connection	U1	Telcordia Issue 1	Level I		1.00	0.014385	.0992	69515442.63
1654226303	Connection	PCIE1A1-1	Telcordia Issue 1	Level I		1.00	0.029969	.2067	33367412.46
1655902030	Connection	BAT1	Telcordia Issue 1	Level I		1.00	0.029969	.2067	33367412.46
165490700B	Connection	CN2,CN4	Telcordia Issue 1	Level I		2.00	0.029969	.4135	33367412.46
1655302020	Connection	CN3	Telcordia Issue 1	Level I		1.00	0.029969	.2067	33367412.46
1654445300	Connection	CN5	Telcordia Issue 1	Level I		1.00	0.023975	.1654	41709265.58
1655305020	Connection	CN6	Telcordia Issue 1	Level I		1.00	0.029969	.2067	33367412.46
1655003010	Connection	CN12	Telcordia Issue 1	Level I		1.00	0.029969	.2067	33367412.46
1655905032	Connection	CN13,CN14,CN16, CN17,CN18,CN19	Telcordia Issue 1	Level I		6.00	0.029969	1.2404	33367412.46
1654808309	Connection	CN15	Telcordia Issue 1	Level I		1.00	0.023975	.1654	41709265.58
1655910131	Connection	CN20	Telcordia Issue 1	Level I		1.00	0.029969	.2067	33367412.46
1653005201	Connection	CN26	Telcordia Issue 1	Level I		1.00	0.029969	.2067	33367412.46
1655306023	Connection	CN22	Telcordia Issue 1	Level I		1.00	0.029969	.2067	33367412.46

**AAEON Reliability Prediction Report**

**Part Number** 9697QM5741-D  
**Reference Des**  
**Date** 07. 20, 2011  
**Environment** GF, GU - Ground Fixed, Uncontrolled  
**Temp. (°C)** 26.00



**Description** Top-level assembly  
**File Name** GENE-QM57-A03.RPJ  
**Time** 9:33  
**Failure Rate** 14.496737  
**MTBF** 68,981

Part Number	Category	Location	Calculation Model	Quality	Tem. Rise	Quantity	Failure Rate, Unit	Failure Rate, %	MTBF, Unit
165251420B	Connection	CN23,CN24	Telcordia Issue 1	Level I		2.00	0.023975	.3308	41709265.58
1654409103	Connection	CN28	Telcordia Issue 1	Level I		1.00	0.023975	.1654	41709265.58
1655909031	Connection	CN30	Telcordia Issue 1	Level I		1.00	0.029969	.2067	33367412.46
1652602105	Connection	CN33	Telcordia Issue 1	Level I		1.00	0.029969	.2067	33367412.46
1655306020	Connection	CN34	Telcordia Issue 1	Level I		1.00	0.029969	.2067	33367412.46
1655003023	Connection	CN35	Telcordia Issue 1	Level I		1.00	0.029969	.2067	33367412.46
165390003B	Connection	CN11	Telcordia Issue 1	Level I		1.00	0.029969	.2067	33367412.46
1653003101	Connection	JP1,JP3,JP4,JP5, JP6	Telcordia Issue 1	Level I		5.00	0.029969	1.0337	33367412.46
1653003201	Connection	JP7	Telcordia Issue 1	Level I		1.00	0.029969	.2067	33367412.46
175011901C	Miscellaneous	BAT1	Telcordia Issue 1	Level I		1.00	0.900000	6.2083	1111111.11