

COM-TC

Reliability Prediction Report (MTBF)

Summary	Failure Rate: 8.977887ppm MTBF: 111,385 hours
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Issue date	Approval	Test Engineer
2011/12/09	Jansin Lee	Jessica Chou

Reliability Prediction (MTBF)

I . Model Name: COM-TC (9697TC0001-D)

II . Prediction Date: Dec. 9th, 2011

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:

COM-TC (9697TC0001-D):

- Failure Rate: 8.977887ppm

- MTBF: 111,385 hours

AAEON Reliability Prediction Report

Part Number 9697TC0001-D
Reference Des
Date 12. 9, 2011
Environment GF, GU - Ground Fixed, Uncontrolled
Temp. (°C) 25.00



Description Top-level assembly
File Name COM-TC.RPJ
Time 14:18
Failure Rate 8.977887
MTBF 111,385

Assembly Name	Part Number	Model	Method	Environment	Duty Cycle	Qty	Failure Rate	MTBF
COM-TC	9697TC0001-D	Telcordia Issue 1	Method I Case 3	GF, GU - Ground Fixed, Uncontrolled	100.00	1.00	8.98	111384.79

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Time 14:18
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Part Number	Category	Location	Calculation Model	Quality	Tem. Rise	Quantity	Failure Rate, Unit	Failure Rate, %	MTBF, Unit
1050501234	Resistor	R185,R186,R187, R188,R189,R192, R193	Telcordia Issue 1	Level I		7.00	0.002268	.1768	440974090.03
1050510034	Resistor	R550,R551,R552, R554,R555,R665	Telcordia Issue 1	Level I		6.00	0.002268	.1516	440974090.03
1050518264	Resistor	R14,R5	Telcordia Issue 1			2.00	0.000756	.0168	1322922270.09
1050520004	Resistor	R589,R596	Telcordia Issue 1	Level I		2.00	0.002268	.0505	440974090.03
1050535764	Resistor	R13,R6	Telcordia Issue 1	Level I		2.00	0.002268	.0505	440974090.03
1050551004	Resistor	R117,R97	Telcordia Issue 1	Level I		2.00	0.002268	.0505	440974090.03
1050556269	Resistor	R91,R92,R93	Telcordia Issue 1	Level I		3.00	0.002268	.0758	440974090.03
1050560464	Resistor	R35	Telcordia Issue 1	Level I		1.00	0.002268	.0253	440974090.03
1052500171	Resistor	FB14	Telcordia Issue 1	Level I		1.00	0.002268	.0253	440974090.03
1053500489	Resistor	R303,R305	Telcordia Issue 1	Level I		2.00	0.002268	.0505	440974090.03
1054500889	Resistor	R302	Telcordia Issue 1	Level I		1.00	0.002268	.0253	440974090.03
1059700001	Resistor	L3,L4,L5,L6,L7, R517,R549,R562, R563,R569,R96	Telcordia Issue 1	Level I		11.00	0.002268	.2778	440974090.03
105A500103	Resistor	FB15	Telcordia Issue 1	Level I		1.00	0.002268	.0253	440974090.03
105A500139	Resistor	R102,R103,R105, R106,R108,R110, R112,R114,R115, R116,R119,R120, R262,R271,R461, R595,R651,R87,R88, R89,R98,R99	Telcordia Issue 1	Level I		22.00	0.002268	.5557	440974090.03
105A500239	Resistor	R104,R109,R111, R118,R656	Telcordia Issue 1	Level I		5.00	0.002268	.1263	440974090.03
105A500333	Resistor	R649,R650	Telcordia Issue 1	Level I		2.00	0.002268	.0505	440974090.03
105A501039	Resistor	R131,R18,R414,R415, R548,R613,R618, R622,R626,R627, R628,R629,R639, R640,R641,R642, R648,R658,R661, R669,R674,R681, R699,R707,R708	Telcordia Issue 1	Level I		25.00	0.002268	.6315	440974090.03
105A501333	Resistor	R564,R565	Telcordia Issue 1	Level I		2.00	0.002268	.0505	440974090.03
105A501633	Resistor	R645	Telcordia Issue 1	Level I		1.00	0.002268	.0253	440974090.03
105A503039	Resistor	R709	Telcordia Issue 1	Level I		1.00	0.002268	.0253	440974090.03
105A503309	Resistor	R28,R29,R30,R31, R32,R453,R490,R491, R586	Telcordia Issue 1	Level I		9.00	0.002268	.2273	440974090.03
105A505109	Resistor	R173	Telcordia Issue 1	Level I		1.00	0.002268	.0253	440974090.03
105A510003	Resistor	R630,R634,R646, R647	Telcordia Issue 1	Level I		4.00	0.002268	.1010	440974090.03

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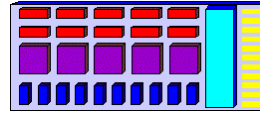


Description Top-level assembly
File Name COM-TC.RPJ
Time 14:18
Failure Rate 8.977887
MTBF 111,385

Part Number	Category	Location	Calculation Model	Quality	Tem. Rise	Quantity	Failure Rate, Unit	Failure Rate, %	MTBF, Unit
1121501691	Capacitor	C10,C100,C101,C102, C107,C108,C109,C11, C110,C111,C112, C113,C114,C115, C116,C117,C118,C12, C123,C124,C125, C126,C127,C128, C129,C13,C130,C131, C132,C133,C134, C135,C136,C138,C14, C140,C142,C147,C15, C156,C157,C16,C175, C178,C179,C180,	Telcordia Issue 1	Level I		159.00	0.004535	8.0323	220487045.01
1122547450	Capacitor	C501	Telcordia Issue 1	Level I		1.00	0.004535	.0505	220487045.01
1124410080	Capacitor	C494	Telcordia Issue 1	Level I		1.00	0.004535	.0505	220487045.01
1124418090	Capacitor	C17,C18,C308,C310	Telcordia Issue 1	Level I		4.00	0.004535	.2021	220487045.01
1124522280	Capacitor	C22	Telcordia Issue 1	Level I		1.00	0.004535	.0505	220487045.01
1124547190	Capacitor	C477	Telcordia Issue 1	Level I		1.00	0.004535	.0505	220487045.01
1129610051	Capacitor	C266,C456,C460, TC16,TC17	Telcordia Issue 1	Level I		5.00	0.004535	.2526	220487045.01
1129610080	Capacitor	C278,C280,C281, C284,C291,C294, C301,C451,C452, C496	Telcordia Issue 1	Level I		10.00	0.004535	.5052	220487045.01
1129622690	Capacitor	C103,C104,C105, C106,C119,C120, C121,C122,C216, C222,C226,C240, C243,C245,C252, C254,C258,C441	Telcordia Issue 1	Level I		18.00	0.004535	.9093	220487045.01
1129701791	Capacitor	C153,C154,C155, C158,C159,C160, C161,C162,C163, C164,C165,C183, C184,C204,C206, C401,C469	Telcordia Issue 1	Level I		17.00	0.004535	.8588	220487045.01
1129710090	Capacitor	C502,C503	Telcordia Issue 1	Level I		2.00	0.004535	.1010	220487045.01
1129710091	Capacitor	C149,C150,C444, C445	Telcordia Issue 1	Level I		4.00	0.004535	.2021	220487045.01
1129710390	Capacitor	C499	Telcordia Issue 1	Level I		1.00	0.004535	.0505	220487045.01
1129710391	Capacitor	C144,C145,C480	Telcordia Issue 1	Level I		3.00	0.004535	.1516	220487045.01
1129715090	Capacitor	C295,C296	Telcordia Issue 1	Level I		2.00	0.004535	.1010	220487045.01
1129747090	Capacitor	C47,C84	Telcordia Issue 1	Level I		2.00	0.004535	.1010	220487045.01
1189615151	Capacitor	TC1,TC12,TC19,TC2, TC20,TC22	Telcordia Issue 1	Level I		6.00	0.004535	.3031	220487045.01

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11E9622050	Capacitor	C212,C239,C304, C312,C314,C322, C330,C331,C332, C333,C437,C438, C439,C440,C453, C466,C519,C58,C82	Telcordia Issue 1	Level I		19.00	0.004535	.9598	220487045.01
121110106B	Inductor	L2	Telcordia Issue 1	Level I		1.00	0.086173	.9598	11604581.32
121110106G	Inductor	L10,L11,L12	Telcordia Issue 1	Level I		3.00	0.086173	2.8795	11604581.32
121110156K	Inductor	L13	Telcordia Issue 1	Level I		1.00	0.086173	.9598	11604581.32
1211101863	Inductor	L1	Telcordia Issue 1	Level I		1.00	0.086173	.9598	11604581.32
121110336X	Inductor	L14	Telcordia Issue 1	Level I	18.70	1.00	0.121650	1.3550	8220283.52
121110476Q	Inductor	L8	Telcordia Issue 1	Level I		1.00	0.086173	.9598	11604581.32
121110476R	Inductor	L9	Telcordia Issue 1	Level I		1.00	0.086173	.9598	11604581.32
1212306030	Resistor	FB10,FB16,FB19, FB20,FB9	Telcordia Issue 1	Level I		5.00	0.011379	.6337	87878027.07
1212306035	Inductor	FB1,FB2,FB3,FB4, FB5,FB6,FB7,FB8	Telcordia Issue 1	Level I		8.00	0.002268	.2021	440974090.03
121230603S	Inductor	FB17,FB18	Telcordia Issue 1	Level I		2.00	0.002268	.0505	440974090.03
123132505D	Miscellaneous	Y2,Y3,Y4	Telcordia Issue 1	Level I		3.00	0.150000	5.0123	6666666.67
1231332721	Miscellaneous	Y5	Telcordia Issue 1	Level I		1.00	0.150000	1.6708	6666666.67
1231332722	Miscellaneous	Y1,Y6	Telcordia Issue 1	Level I		2.00	0.150000	3.3415	6666666.67
1301002240	Semiconductor	D15	Telcordia Issue 1	Level I		1.00	0.023881	.2660	41874327.58
1301005440	Semiconductor	D17	Telcordia Issue 1	Level I		1.00	0.023881	.2660	41874327.58
1301005443	Semiconductor	D18,D19	Telcordia Issue 1	Level I		2.00	0.027212	.6062	36747840.84
1304001340	Semiconductor	LED1,LED2	Telcordia Issue 1	Level I		2.00	0.004877	.1086	205063180.81
1304101340	Semiconductor	D11	Telcordia Issue 1	Level I		1.00	0.004877	.0543	205063180.81
1314111713	Integrated Circuit	Q17	Telcordia Issue 1	Level I		1.00	0.059366	.6612	16844654.92
1314531710	Integrated Circuit	U20	Telcordia Issue 1	Level I		1.00	0.059366	.6612	16844654.92
1315230511	Semiconductor	Q39	Telcordia Issue 1	Level I		1.00	0.079603	.8867	12562298.27
1315441012	Semiconductor	Q24	Telcordia Issue 1	Level I	18.90	1.00	0.132667	1.4777	7537679.72
1315443510	Semiconductor	Q26	Telcordia Issue 1	Level I		1.00	0.079603	.8867	12562298.27
1315446310	Semiconductor	U37	Telcordia Issue 1	Level I		1.00	0.079603	.8867	12562298.27
1315667910	Semiconductor	Q29	Telcordia Issue 1	Level I		1.00	0.159207	1.7733	6281149.14
1315668012	Semiconductor	U24	Telcordia Issue 1	Level I		1.00	0.023881	.2660	41874327.58
1315700212	Semiconductor	Q35	Telcordia Issue 1	Level I		1.00	0.079603	.8867	12562298.27
1315700216	Semiconductor	Q1,Q13,Q18,Q19,Q2, Q20,Q21,Q22,Q25, Q27,Q28,Q3,Q31,Q33, Q4,Q5	Telcordia Issue 1	Level I		16.00	0.079603	14.1865	12562298.27
1315889611	Semiconductor	U29	Telcordia Issue 1	Level I		1.00	0.079603	.8867	12562298.27

