

# AEC-6612-B

## Reliability Prediction Report (MTBF)

Summary	Failure Rate: 10053.886637 ppm MTBF: 99,464 Hours
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Issue date	Approval	Test Engineer
2013/09/24	Tom Lin	Louie Lee

# Reliability Prediction (MTBF)

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**I . Model Name:** AEC-6612-B

**II . Prediction Date:** September. 24, 2013

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

**IV . Predicted by:** Louie Lee

**V . Equipment:** Windchill Quality Solutions 10.1

## **VI. Simulation Environment:**

- Temperature: 30 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 Failure rate multiplier is 1000000000.
- MTBF : MTBF is always specified in hours.

**VIII. Prediction Result:**

AEC-6612-B (TF-AEC-6612-B2M-1010):

- Failure Rate: 10053.886637 ppm
- MTBF: 99,464 Hours

**AAEON Reliability Prediction  
Summary**

**File Name:** AEC-6612B.rfp  
**Duty Cycle:** 100  
**Calculation Model:** Telcordia Issue 2  
**Method:** Method I Case 3

**Failure Rate:** 10053.886637  
**MTBF (hrs):** 99,464  
**Temperature:** 30  
**Environment:** GF, GU - Ground Fixed, Uncontrolled

Assembly Name	Part Number	Ref Des	Quantity	Failure Rate	MTBF
AEC-6612-B	TF-AEC-6612-B2M -1010		1	10053.886637	99,464
GENE-LN05B	9697LN5B05-D		1	9540.973489	104,811
Power Board 9~30V	9697P21D00-D		1	586.029503	1,706,399

**File Name:** AEC-6612B.rfp  
**Assembly:** 9697LN5B05-D  
**Ref Des:**  
**Description:**

**Failure Rate:** 9540.973489  
**MTBF (hrs):** 104,811  
**Temperature:** 30  
**Environment:** GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1050501004	Resistor	R133,R181,R376, R382,R387,R424, R425,R518,R519, R520,R557,R623, R624		2.547039	13	27342571.921361
1050502204	Resistor	R145,R241,R374, R452,R453,R499,R56, R63		2.547039	8	43225424.698300
1050505124	Resistor	R57,R578		2.547039	2	154078778.388085
1050507530	Resistor	R217,R222		2.547039	2	154078778.388085
1050510034	Resistor	R137,R21,R316,R320, R351,R393,R394, R406,R461,R541		2.547039	10	35079934.879747
1050524904	Resistor	R180,R343,R358,R46		2.547039	4	82309758.689546
1050533034	Resistor	R348,R373		2.547039	2	154078778.388085
1050533214	Resistor	R525		2.547039	1	282340674.079668
1050547004	Resistor	R197,R210,R404, R645,R646		2.547039	5	67008142.102588
1050586604	Resistor	R132		2.547039	1	282340674.079668
1050702734	Resistor	R54		2.547039	1	282340674.079668
1059700001	Resistor	R288,R330		2.547039	2	154078778.388085
1059702261	Resistor	R472,R473		2.547039	2	154078778.388085
105A500139	Resistor	R141,R147,R148, R160,R184,R189, R203,R227,R273, R277,R284,R289, R427,R538,R61		2.547039	15	23852782.943395
105A500239	Resistor	R192,R38		2.547039	2	154078778.388085
105A501039	Resistor	R302,R304,R31,R357, R37,R421,R507,R508, R509,R510,R511, R527,R571,R89,R90		2.547039	15	23852782.943395

**File Name:** AEC-6612B.rfp  
**Assembly:** 9697LN5B05-D  
**Ref Des:**  
**Description:**

**Failure Rate:** 9540.973489  
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**Temperature:** 30  
**Environment:** GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
105A501233	Resistor	R385		2.547039	1	282340674.079668
105A501413	Resistor	R533		2.547039	1	282340674.079668
105A501539	Resistor	R496		2.547039	1	282340674.079668
105A502003	Resistor	R64		2.547039	1	282340674.079668
105A502039	Resistor	R209,R234,R 576, R598,R599,R 93		2.547039	6	56573956.677649
105A503039	Resistor	R536		2.547039	1	282340674.079668
105A503309	Resistor	R105,R22,R2 28,R232, R24,R279,R2 85,R290, R295,R309,R 550, R559,R68,R7 ,R73, R85,R91,R97		2.547039	18	20032117.836120
105A505109	Resistor	R119,R130,R 139, R155,R182,R 183, R185,R530,R 532, R537,R543,R 547, R554		2.547039	13	27342571.921361
105A505163	Resistor	R276		2.547039	1	282340674.079668
105A507509	Resistor	R568,R572,R 574, R629,R630,R 631		2.547039	6	56573956.677649
105A510009	Resistor	R10,R121,R3 60,R479, R484,R485,R 526, R542,R597,R 625, R626,R88		2.547039	12	29507083.749401
105A513033	Resistor	R151		2.547039	1	282340674.079668
105A515009	Resistor	R134,R135,R 136, R632,R633,R 634		2.547039	6	56573956.677649
105A515033	Resistor	R75		2.547039	1	282340674.079668
105A522669	Resistor	R179		2.547039	1	282340674.079668
105A523713	Resistor	R482		2.547039	1	282340674.079668
105A528723	Resistor	R235		2.547039	1	282340674.079668
105A531613	Resistor	R202		2.547039	1	282340674.079668
105A532413	Resistor	R52		2.547039	1	282340674.079668
105A534823	Resistor	R569		2.547039	1	282340674.079668

**File Name:** AEC-6612B.rfp  
**Assembly:** 9697LN5B05-D  
**Ref Des:**  
**Description:**

**Failure Rate:** 9540.973489  
**MTBF (hrs):** 104,811  
**Temperature:** 30  
**Environment:** GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
105A536533	Resistor	R81		2.547039	1	282340674.079668
105A540213	Resistor	R263		2.547039	1	282340674.079668
105A545303	Resistor	R51		2.547039	1	282340674.079668
105A549919	Resistor	R291,R312,R577, R594,R595,R596,R99		2.547039	7	48991237.965885
105A549969	Resistor	R517		2.547039	1	282340674.079668
105A554923	Resistor	R465		2.547039	1	282340674.079668
105A556269	Resistor	R196,R20,R352		2.547039	3	107020754.986850
105A560423	Resistor	R350		2.547039	1	282340674.079668
105A561933	Resistor	R19		2.547039	1	282340674.079668
105A566503	Resistor	R470		2.547039	1	282340674.079668
105A568123	Resistor	R570		2.547039	1	282340674.079668
105A568163	Resistor	R146		2.547039	1	282340674.079668
105A569823	Resistor	R25		2.547039	1	282340674.079668
105A573223	Resistor	R198		2.547039	1	282340674.079668
105A575003	Resistor	R528		2.547039	1	282340674.079668
105A575033	Resistor	R95		2.547039	1	282340674.079668
105A580623	Resistor	R70		2.547039	1	282340674.079668
105A580663	Resistor	R156,R158		2.547039	2	154078778.388085
105A584523	Resistor	R468		2.547039	1	282340674.079668
105A597604	Resistor	R521		2.547039	1	282340674.079668
105A700003	Resistor	R347,R354,R403, R462,R463,R464, R552,R556		2.547039	8	43225424.698300

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**Description:**

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105A700009	Resistor	R101,R102,R103,R11,R143,R144,R152,R17,R188,R205,R208,R212,R214,R218,R223,R231,R233,R242,R243,R244,R246,R262,R287,R300,R301,R305,R315,R337,R362,R372,R378,R379,R391,R4,R401,R422,R438,R443,R444,R445,R446,R447,		2.547039	76	4951856.924759
105A700139	Resistor	R125,R163,R186,R190,R193,R221,R229,R230,R239,R249,R250,R251,R252,R253,R26,R260,R272,R28,R286,R29,R323,R336,R36,R368,R388,R39,R408,R41,R411,R43,R434,R435,R454,R490,R512,R534,R545,R558,R565,R573,R589,R59,R592,R593,R641,		2.547039	47	7918121.839508
105A700239	Resistor	R600,R601		2.547039	2	154078778.388085



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105A701003	Resistor	R531		2.547039	1	282340674.079668
105A701009	Resistor	R335,R361,R491, R493		2.547039	4	82309758.689546
105A701039	Resistor	R107,R117,R120, R128,R161,R162, R165,R175,R177, R187,R194,R195,R2, R206,R236,R238, R248,R254,R255, R258,R261,R265, R266,R268,R270, R275,R281,R292, R293,R298,R308, R311,R328,R329, R331,R332,R334, R342,R355,R363,		2.547039	80	4709205.918606
105A701059	Resistor	R116,R23,R314,R35, R365		2.547039	5	67008142.102588
105A701069	Resistor	R40,R513		2.547039	2	154078778.388085
105A702229	Resistor	R100,R149,R153, R344,R364,R383, R384,R62,R83		2.547039	9	38754445.632391
105A702263	Resistor	R240,R460,R474		2.547039	3	107020754.986850
105A703363	Resistor	R226		2.547039	1	282340674.079668
105A704709	Resistor	R390,R400		2.547039	2	154078778.388085

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Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
105A704729	Resistor	R1,R16,R166, R167, R168,R169,R 191, R215,R216,R 225, R259,R296,R 30,R307, R349,R356,R 367, R399,R415,R 45,R486, R487,R488,R 498, R515,R522,R 529,R53, R60,R640,R6 47,R87		2.547039	32	11502702.879433
105A705139	Resistor	R27,R32,R33 ,R34, R359,R377,R 409, R412,R416,R 42,R6		2.547039	11	32049696.385471
105A705629	Resistor	R418		2.547039	1	282340674.079668
105A706829	Resistor	R126,R127		2.547039	2	154078778.388085
105A708229	Resistor	R164,R178,R 278, R346,R353,R 396, R410,R456,R 457, R458,R459,R 480, R548		2.547039	13	27342571.921361
105A710039	Resistor	R13,R15,R44 ,R8		2.547039	4	82309758.689546
105A722009	Resistor	R579,R580,R 581, R582,R583,R 584		2.547039	6	56573956.677649
105A733009	Resistor	R18,R3,R324 ,R325, R326,R9		2.547039	6	56573956.677649
105A747039	Resistor	R327		2.547039	1	282340674.079668
105A768009	Resistor	R106,R118,R 124, R129,R138,R 86,R98		2.547039	7	48991237.965885
106B501032	Resistor	RT1		7.724580	1	66247589.526685
106B510030	Resistor	RT2		7.724580	1	66247589.526685

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**Description:**

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**Temperature:** 30  
**Environment:** GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1121501691	Capacitor	C1,C10,C100 ,C101, C103,C105,C 107, C108,C109,C 11,C111, C112,C113,C 114, C115,C116,C 117, C118,C119,C 12,C122, C125,C126,C 127, C128,C129,C 13,C132, C133,C135,C 136, C139,C14,C1 40,C141, C142,C143,C 144, C145,C146,C 147, C148,C149,C 15,C		1.128806	233	3740866.790770
1122522890	Capacitor	C259		1.128806	1	704977644.692287
1124410080	Capacitor	C51		1.128806	1	704977644.692287
1124410191	Capacitor	C211,C213,C 442, C443,C444,C 445, C454,C60		1.128806	8	101746760.035398
1124427091	Capacitor	C121,C205,C 419, C424,C426,C 456, C487,C488,C 489,C73, C75,C77		1.128806	12	68856937.301178
1124522290	Capacitor	C294,C308,C 316		1.128806	3	257514172.353070
1124533282	Capacitor	C88		1.128806	1	704977644.692287
1124547190	Capacitor	C192,C266,C 434, C435,C436,C 450, C463,C464		1.128806	8	101746760.035398
1129522790	Capacitor	C208,C457,C 458		1.128806	3	257514172.353070

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1129622690	Capacitor	C102,C106,C120, C191,C217,C236, C247,C342,C390,C79, C86,C92,C98		1.128806	13	63728475.410842
1129701791	Capacitor	C131,C18,C246,C35, C36,C367,C37,C38, C39,C40,C41,C415, C42,C428,C429,C431, C432,C470,C471, C472,C473,C57,C94		1.128806	23	36609385.175833
1129710091	Capacitor	C193,C216,C479, C480,C481,C49,C56		1.128806	7	115633865.771428
1129710391	Capacitor	C207,C221,C225, C265,C299,C430,C76		1.128806	7	115633865.771428
1174522180	Capacitor	CP1,CP10,CP11,CP12, CP13,CP2,CP3,CP4, CP5,CP6,CP7,CP8, CP9		1.128806	13	63728475.410842
1181627191	Capacitor	EC1		4.744484	1	159663026.715137
1182622080	Capacitor	TC6		4.744484	1	159663026.715137
1189615151	Capacitor	TC10,TC12,TC13, TC18,TC24,TC25, TC26		4.744484	7	26949727.707925
1189627150	Capacitor	TC14,TC15,TC16, TC17,TC19,TC5,TC9		4.744484	7	26949727.707925
1189633193	Capacitor	TC1,TC11,TC2,TC7, TC8		4.744484	5	36944177.000623
1189633196	Capacitor	TC20,TC21,TC22, TC23,TC3		4.744484	5	36944177.000623
11C1547890	Capacitor	C24,C287,C31		1.128806	3	257514172.353070

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11C2510480	Capacitor	C231,C47,C58		1.128806	3	257514172.353070
11C2539290	Capacitor	C63		1.128806	1	704977644.692287
11C4501380	Capacitor	C53		1.128806	1	704977644.692287
11C4522190	Capacitor	C267,C277		1.128806	2	375289731.076049
11C4547290	Capacitor	C490,C491		1.128806	2	375289731.076049
11C4582190	Capacitor	C301		1.128806	1	704977644.692287
11C9501050	Capacitor	C341		1.128806	1	704977644.692287
11E1510050	Capacitor	C19,C21,C210,C22,C223,C224,C386,C391		1.128806	8	101746760.035398
11E4433090	Capacitor	C474,C482		1.128806	2	375289731.076049
11E9501091	Capacitor	C123,C134,C137,C150,C178,C182,C183,C184,C185,C218,C239,C264,C30,C300,C305,C315,C317,C318,C319,C320,C321,C323,C324,C325,C326,C328,C332,C333,C335,C336,C338,C343,C345,C346,C347,C353,C354,C364,C365,C368,		1.128806	56	15308283.020186

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Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
11E9510050	Capacitor	C104,C124,C130, C152,C181,C188, C206,C215,C226, C229,C252,C261, C275,C279,C280, C295,C298,C310,C32, C327,C329,C33,C330, C34,C344,C348,C349, C378,C379,C380, C381,C397,C398, C405,C408,C417, C418,C425,C438, C446,C448,C455,		1.128806	46	18574133.926778
11E9622050	Capacitor	C110,C169,C232, C240,C241,C306, C356,C363,C402, C433,C447,C452		1.128806	12	68856937.301178
11E9647680	Capacitor	C201,C248,C278, C296,C362,C373, C389,C427,C439,C45, C52		1.128806	11	74892583.279796
121110106D	Inductor	L10,L11,L12, L7,L8, L9		4.944252	6	30055900.223009
121110106G	Inductor	L6		4.944252	1	154760964.143460
121110156J	Inductor	L3		4.944252	1	154760964.143460
121110156K	Inductor	L2,L4,L5		4.944252	3	57363284.375370
121110336Y	Inductor	L1		4.944252	1	154760964.143460

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1212306030	Inductor	FB1,FB10,FB11,FB12,FB13,FB14,FB15,FB16,FB18,FB20,FB21,FB25,FB26,FB27,FB28,FB29,FB3,FB30,FB31,FB33,FB38,FB39,FB4,FB40,FB41,FB42,FB5,FB6,FB7,FB8,FB9		4.944252	31	6193179.233619
1212306031	Inductor	FB32		4.944252	1	154760964.143460
1212306035	Inductor	FB17,FB19,FB22,FB23,FB34,FB35,FB36,FB37,FB43,FB44,FB45		4.944252	11	16872203.304846
12123C0003	Inductor	FB2,FB24		4.944252	2	83201062.149749
1214309008	Inductor	CH1,CH2,CH3,CH4,CH5,CH6,CH7		4.944252	7	25970990.056682
123131435J	Miscellaneous	Y2		19.200000	1	23844262.770939
123132505D	Miscellaneous	Y3,Y4		19.200000	2	8854051.752197
1231332721	Miscellaneous	Y1		19.200000	1	23844262.770939
1301005441	Semiconductor	D25		7.793411	1	92807310.010983
1301005442	Semiconductor	D23,D33		7.793411	2	50578095.223398
1301005443	Semiconductor	D14		7.793411	1	92807310.010983
1301005444	Semiconductor	D1,D11,D12,D8		7.793411	4	26989084.126235
1301053040	Semiconductor	D39		7.793411	1	92807310.010983
1304001340	Semiconductor	D17		7.793411	1	92807310.010983
1304101340	Semiconductor	D18		7.793411	1	92807310.010983
1304300140	Semiconductor	D16,D2		7.793411	2	50578095.223398

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**Environment:** GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1305080040	Semiconductor	D10,D15,D24 ,D26, D27,D28,D29 ,D3,D30, D31,D32,D34 ,D35, D36,D37,D38 ,D4,D40, D41,D42,D43 ,D44, D45,D46,D47 ,D48, D49,D5,D50, D51,D6, D7		7.793411	32	3764010.615269
1310390413	Semiconductor	Q20,Q21,Q2 7,Q28, Q29,Q39,Q4 4,Q5		22.463360	8	4877097.849338
1311138610	Semiconductor	Q32,Q34,Q3 5		22.463360	3	12043329.789539
1311390612	Semiconductor	Q26,Q43		22.463360	2	17315095.066101
1315030110	Semiconductor	Q15,Q18		22.463360	2	17315095.066101
1315155510	Semiconductor	U39,U40,U41		22.463360	3	12043329.789539
1315230511	Semiconductor	Q12,Q9		22.463360	2	17315095.066101
1315422410	Semiconductor	U12,U58,U59		22.463360	3	12043329.789539
1315446310	Semiconductor	U43,U45,U47 ,U48		22.463360	4	9270607.712006
1315482110	Semiconductor	U4,U54,U60, U8		22.463360	4	9270607.712006
1315482410	Semiconductor	U53,U63		22.463360	2	17315095.066101
1315667910	Semiconductor	U2		22.463360	1	31642600.748419
1315700216	Semiconductor	Q1,Q10,Q11, Q13,Q17, Q19,Q2,Q22, Q23,Q24, Q25,Q3,Q30, Q31,Q36, Q37,Q38,Q4, Q41,Q42, Q6,Q7,Q8		22.463360	23	1789160.944012
1315970211	Semiconductor	U18,U21,U65 ,U7		22.463360	4	9270607.712006
14S2200900	Integrated Circuit	U37		43.803003	1	11739202.588727
14S2321900	Integrated Circuit	U6		43.803003	1	11739202.588727
14S2362400	Integrated Circuit	U13		43.803003	1	11739202.588727
14S2538000	Integrated Circuit	U16		43.803003	1	11739202.588727
14S2591200	Integrated Circuit	U24		43.803003	1	11739202.588727
14S3050100	Integrated Circuit	U17	31.9	337.638158	1	1522968.650107
14S3066200	Integrated Circuit	U36	27.2	256.175324	1	2007267.214144
14S3111600	Integrated Circuit	U33	42.9	625.696101	1	821824.409984



**File Name:** AEC-6612B.rfp  
**Assembly:** 9697LN5B05-D  
**Ref Des:**  
**Description:**

**Failure Rate:** 9540.973489  
**MTBF (hrs):** 104,811  
**Temperature:** 30  
**Environment:** GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
14S3112400	Integrated Circuit	U30		43.803003	1	11739202.588727
14S3128422	Integrated Circuit	U68		43.803003	1	11739202.588727
14S3156500	Integrated Circuit	U62		43.803003	1	11739202.588727
14S3524700	Integrated Circuit	U67		43.803003	1	11739202.588727
14S4010200	Integrated Circuit	U55		43.803003	1	11739202.588727
14S4010300	Integrated Circuit	U64		43.803003	1	11739202.588727
14S4021301	Integrated Circuit	U10,U15,U19 ,U26, U31,U66		43.803003	6	2750969.191556
14S4048503	Integrated Circuit	U28,U32		43.803003	2	6834791.244197
14S4081110	Integrated Circuit	U46		43.803003	1	11739202.588727
14S4121601	Integrated Circuit	U22		43.803003	1	11739202.588727
14S4180010	Integrated Circuit	U20	30.9	75.018441	1	6854479.046026
14S4195710	Integrated Circuit	U56		43.803003	1	11739202.588727
14S4256701	Integrated Circuit	U34		43.803003	1	11739202.588727
14S4258300	Integrated Circuit	U35		43.803003	1	11739202.588727
14S4280126	Integrated Circuit	U9	33.2	363.937961	1	1412912.045799
14S4362707	Integrated Circuit	U27		43.803003	1	11739202.588727
14S4600004	Integrated Circuit	U3		43.803003	1	11739202.588727
14S4751100	Integrated Circuit	U69		43.803003	1	11739202.588727
14S4911216	Integrated Circuit	U52		43.803003	1	11739202.588727
14S4963502	Integrated Circuit	U51		43.803003	1	11739202.588727
14S5912300	Integrated Circuit	U44		26.018600	1	25551442.237972
14S5A00601	Integrated Circuit	U25		26.018600	1	25551442.237972
14S5A00821	Integrated Circuit	U14,U38,U5		26.018600	3	9949526.289768
14S5A12503	Integrated Circuit	U29		26.018600	1	25551442.237972
14S5A12506	Integrated Circuit	U23		26.018600	1	25551442.237972
14S6216060	Integrated Circuit			11.063278	1	58231413.220643
14S6266121	Integrated Circuit	U11		11.063278	1	58231413.220643
14S6308002	Integrated Circuit	U61		11.063278	1	58231413.220643
14S9103200	Integrated Circuit	U50		43.803003	1	11739202.588727
14S9811500	Integrated Circuit	U1		43.803003	1	11739202.588727
1540710280	Resistor	RP17,RP18		9.971436	2	30043399.401299
1540710382	Resistor	RP1,RP10,RP 9		9.971436	3	21639329.074793
1540733085	Resistor	RP11,RP12,R P13, RP14,RP15,R P16, RP20,RP7,RP 8		9.971436	9	8500232.992379
1540782282	Resistor	RP19,RP2,RP 3,RP4, RP5,RP6		9.971436	6	12090001.526571
16515A099Q	Connection	DIMM1		16.184835	1	35685591.360212
165251420B	Connection	CN24,CN25		16.184835	2	20390152.380746
1652602105	Connection	CN9		16.184835	1	35685591.360212
1653002101	Connection	JP1		16.184835	1	35685591.360212

**File Name:** AEC-6612B.rfp  
**Assembly:** 9697LN5B05-D  
**Ref Des:**  
**Description:**

**Failure Rate:** 9540.973489  
**MTBF (hrs):** 104,811  
**Temperature:** 30  
**Environment:** GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1653003101	Connection	JP2,JP4,JP5,JP6, JP7		16.184835	5	9343344.843761
1653003201	Connection	JP3		16.184835	1	35685591.360212
1653005201	Connection	CN12		16.184835	1	35685591.360212
165320520G	Connection	CN26		16.184835	1	35685591.360212
1653212100	Connection	CN7		16.184835	1	35685591.360212
165321320H	Connection	CN27		16.184835	1	35685591.360212
1653300102	Connection	JP1(1-2),JP2(1-2), JP5(1-2)		16.184835	3	14515880.849373
1653300107	Connection	JP3(5-6),JP6(2-3), JP7(2-3)		16.184835	3	14515880.849373
1653300108	Connection	JP4(1-2)		16.184835	1	35685591.360212
1653900039	Connection	CFD1B		16.184835	1	35685591.360212
165392521J	Connection	CFD1A		16.184835	1	35685591.360212
1654030003	Connection	CN29		16.184835	1	35685591.360212
1654226303	Connection	PCIE1A		16.184835	1	35685591.360212
1654409103	Connection	CN32		16.184835	1	35685591.360212
1654415308	Connection	CN33		16.184835	1	35685591.360212
1654808309	Connection	CN30		16.184835	1	35685591.360212
1654903900	Connection	CN34		16.184835	1	35685591.360212
1654907004	Connection	CN5,CN6		16.184835	2	20390152.380746
1654926900	Connection	PCIE1B		16.184835	1	35685591.360212
1655003010	Connection	CN2		16.184835	1	35685591.360212
1655003022	Connection	CN4		16.184835	1	35685591.360212
1655302020	Connection	CN11		16.184835	1	35685591.360212
1655305020	Connection	CN28		16.184835	1	35685591.360212
1655306020	Connection	CN3		16.184835	1	35685591.360212
1655902030	Connection	BAT1A		16.184835	1	35685591.360212
1655905032	Connection	CN14,CN16,CN17, CN19,CN20		16.184835	5	9343344.843761
1655909031	Connection	CN13,CN15,CN18, CN21,CN22		16.184835	5	9343344.843761
1655909032	Connection	CN10		16.184835	1	35685591.360212
1655910131	Connection	CN23		16.184835	1	35685591.360212
175011901M	Miscellaneous	BAT1B		306.000000	1	1681683.006787
1752000501	Miscellaneous	FS1		2.400000	1	254626042.602335
1752001603	Miscellaneous	FS2,FS3		2.400000	2	143944727.196625

File Name: AEC-6612B.rfp  
 Assembly: 9697P21D00-D  
 Ref Des:  
 Description:

Failure Rate: 586.029503  
 MTBF (hrs): 1,706,399  
 Temperature: 30  
 Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1050510034	Resistor	R10,R19,R21 ,R26, R27,R5,R7		2.547039	7	48991237.965885
1053500489	Resistor	R15		2.547039	1	282340674.079668
1059700201	Resistor	R14		2.547039	1	282340674.079668
105A501053	Resistor	R3,R6		2.547039	2	154078778.388085
105A501139	Resistor	R29		2.547039	1	282340674.079668
105A501539	Resistor	R1		2.547039	1	282340674.079668
105A502039	Resistor	R12		2.547039	1	282340674.079668
105A509123	Resistor	R18		2.547039	1	282340674.079668
105A512039	Resistor	R13,R9		2.547039	2	154078778.388085
105A515433	Resistor	R24		2.547039	1	282340674.079668
105A523713	Resistor	R20		2.547039	1	282340674.079668
105A549919	Resistor	R8		2.547039	1	282340674.079668
105A700009	Resistor	R23,R25		2.547039	2	154078778.388085
105A701009	Resistor	R2,R22,R28, R4		2.547039	4	82309758.689546
105B503589	Resistor	R16,R17		2.547039	2	154078778.388085
1114633130	Capacitor	C2		4.744484	1	159663026.715137
1124410190	Capacitor	C25,C27		1.128806	2	375289731.076049
1129701790	Capacitor	C20,C28		1.128806	2	375289731.076049
1129747090	Capacitor	C29		1.128806	1	704977644.692287
1181633112	Capacitor	C1		4.744484	1	159663026.715137
11C1522480	Capacitor	C16,C17		1.128806	2	375289731.076049
11C1547890	Capacitor	C24		1.128806	1	704977644.692287
11C4501650	Capacitor	C10,C11,C14 ,C15, C18,C19,C26 ,C5,C9		1.128806	9	90863428.080946
11C4547690	Capacitor	C21,C22,C3, C4		1.128806	4	196873384.410843
11E1522680	Capacitor	C6		1.128806	1	704977644.692287
11E2510060	Capacitor	C12,C13,C23 ,C7,C8		1.128806	5	159367490.199266
1211100111	Inductor	L1	25.2	7.684381	1	99575640.699364
12143E0002	Inductor	L2		4.944252	1	154760964.143460
1300414841	Semiconductor	D1,D2		7.793411	2	50578095.223398
1301003440	Semiconductor	D3,D4,D6,D8		7.793411	4	26989084.126235
1302005641	Semiconductor	D7		7.793411	1	92807310.010983
130533CA40	Semiconductor	D5		7.793411	1	92807310.010983
1310390410	Semiconductor	Q1		22.463360	1	31642600.748419
1315442410	Semiconductor	Q3,Q7		22.463360	2	17315095.066101
1315844710	Semiconductor	Q2,Q4,Q5,Q6		22.463360	4	9270607.712006
14S3378000	Integrated Circuit	U2		43.803003	1	11739202.588727
14S3435600	Integrated Circuit	U1		43.803003	1	11739202.588727
14S3520900	Integrated Circuit	U3		43.803003	1	11739202.588727
1655102010	Connection	CN1		16.184835	1	35685591.360212

**Reliability Prediction  
Summary**

**File Name:** AEC-6612B.rfp  
**Assembly:** 9697P21D00-D  
**Ref Des:**  
**Description:**

**Failure Rate:** 586.029503  
**MTBF (hrs):** 1,706,399  
**Temperature:** 30  
**Environment:** GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1655103010	Connection	CN2		16.184835	1	35685591.360212
1752001900	Miscellaneous	F1		2.400000	1	254626042.602335