

# AEC-6523

## Reliability Prediction Report (MTBF)

Summary	Failure Rate: 7405.970322 ppm MTBF: 135,026 Hours
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Issue date	Approval	Test Engineer
2014/01/06	Tom Lin	Louie Lee

# Reliability Prediction (MTBF)

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**I . Model Name:** AEC-6523

**II . Prediction Date:** January. 06, 2014

**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-6523 (AEC-6523-A1M-1010):

- Failure Rate: 7405.970322 ppm
- MTBF: 135,026 Hours

**AAEON Reliability Prediction  
Summary**

**File Name:** AEC-6523.rfp  
**Duty Cycle:** 100  
**Calculation Model:** Telcordia Issue 2  
**Method:** Method I Case 3

**Failure Rate:** 7405.970322  
**MTBF (hrs):** 135,026  
**Temperature:** 30  
**Environment:** GF, GU - Ground Fixed, Uncontrolled

Assembly Name	Part Number	Ref Des	Quantity	Failure Rate	MTBF
AEC-6523	AEC-6523-A1M-1010		1	7405.970322	135,026
(TF)ASS'Y.GENE-CV05.Rev.A1.0_0_0.w/CDV N2600(B3).WiTAS II(-40~+85dC).for AEC-6523	9697CV0512-D		1	6892.344944	145,089
(TF)ASS'Y.Power Board.PER-P21D	9697P21D00-D		1	583.274452	1,714,459

**File Name:** AEC-6523.rfp  
**Assembly:** 9697CV0512-D  
**Ref Des:**  
**Description:**

**Failure Rate:** 6892.344944  
**MTBF (hrs):** 145,089  
**Temperature:** 30  
**Environment:** GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1050501004	Resistor	R221,R415,R436, R548		2.547039	4	82309758.689546
1050501234	Resistor	R119		2.547039	1	282340674.079668
1050502204	Resistor	R158,R161		2.547039	2	154078778.388085
1050504764	Resistor	R108,R36		2.547039	2	154078778.388085
1050505124	Resistor	R135,R259,R360, R446		2.547039	4	82309758.689546
1050507524	Resistor	R214,R276,R567		2.547039	3	107020754.986850
1050507530	Resistor	R156,R244,R267		2.547039	3	107020754.986850
1050510034	Resistor	R116,R138,R18,R354,R368,R395,R441,R452,R457,R471,R476,R628,R71,R84, R88		2.547039	15	23852782.943395
1050512104	Resistor	R254		2.547039	1	282340674.079668
1050513034	Resistor	R124,R77		2.547039	2	154078778.388085
1050514034	Resistor	R444		2.547039	1	282340674.079668
1050515034	Resistor	R113		2.547039	1	282340674.079668
1050522114	Resistor	R453		2.547039	1	282340674.079668
1050524004	Resistor	R12		2.547039	1	282340674.079668
1050524904	Resistor	R201,R89		2.547039	2	154078778.388085
1050545304	Resistor	R405		2.547039	1	282340674.079668
1050547004	Resistor	R331,R333,R37,R540,R543		2.547039	5	67008142.102588
1050551004	Resistor	R125		2.547039	1	282340674.079668
1050561934	Resistor	R107		2.547039	1	282340674.079668
1050569824	Resistor	R121		2.547039	1	282340674.079668
1050590964	Resistor	R111,R118,R172, R174		2.547039	4	82309758.689546
1050700002	Resistor	R592		2.547039	1	282340674.079668
1050700334	Resistor	R112,R462		2.547039	2	154078778.388085
1050702734	Resistor	R30		2.547039	1	282340674.079668
1050703334	Resistor	R460		2.547039	1	282340674.079668
1059700001	Resistor	R241,R318		2.547039	2	154078778.388085
1059710003	Resistor	R418,R419		2.547039	2	154078778.388085
105A500139	Resistor	R173,R182,R234,R237,R398,R422,R87,R95		2.547039	8	43225424.698300
105A500239	Resistor	R73		2.547039	1	282340674.079668

File Name: AEC-6523.rfp  
 Assembly: 9697CV0512-D  
 Ref Des:  
 Description:

Failure Rate: 6892.344944  
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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
105A501039	Resistor	R103,R109,R13,R14,R215,R219,R225,R240,R293,R377,R379,R384,R408,R428,R443,R447,R470,R477,R500,R507,R528,R529,R564,R75,R76		2.547039	25	14603612.751152
105A501233	Resistor	R278,R575		2.547039	2	154078778.388085
105A501413	Resistor	R423		2.547039	1	282340674.079668
105A501539	Resistor	R294,R296,R585		2.547039	3	107020754.986850
105A502039	Resistor	R34,R362,R393		2.547039	3	107020754.986850
105A503039	Resistor	R527		2.547039	1	282340674.079668
105A503309	Resistor	R10,R105,R126,R131,R132,R137,R140,R150,R168,R185,R202,R25,R399,R526,R562,R563,R603,R640		2.547039	18	20032117.836120
105A505109	Resistor	R142,R163,R167,R171,R181,R186		2.547039	6	56573956.677649
105A505163	Resistor	R356		2.547039	1	282340674.079668
105A505629	Resistor	R21		2.547039	1	282340674.079668
105A507509	Resistor	R206,R386,R387,R388		2.547039	4	82309758.689546
105A510009	Resistor	R11,R120,R130,R139,R208,R253,R26,R400,R413,R427		2.547039	10	35079934.879747
105A512039	Resistor	R69		2.547039	1	282340674.079668
105A514014	Resistor	R98		2.547039	1	282340674.079668

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105A515009	Resistor	R220,R223,R226, R635,R636,R637		2.547039	6	56573956.677649
105A522669	Resistor	R101,R205		2.547039	2	154078778.388085
105A523713	Resistor	R230		2.547039	1	282340674.079668
105A524919	Resistor	R345,R346		2.547039	2	154078778.388085
105A527403	Resistor	R199		2.547039	1	282340674.079668
105A528723	Resistor	R238		2.547039	1	282340674.079668
105A533269	Resistor	R193		2.547039	1	282340674.079668
105A540213	Resistor	R355		2.547039	1	282340674.079668
105A549919	Resistor	R416		2.547039	1	282340674.079668
105A549969	Resistor	R196,R207,R509, R510		2.547039	4	82309758.689546
105A551119	Resistor	R122,R123,R455		2.547039	3	107020754.986850
105A553629	Resistor	R424		2.547039	1	282340674.079668
105A554969	Resistor	R204,R412		2.547039	2	154078778.388085
105A560423	Resistor	R32		2.547039	1	282340674.079668
105A560469	Resistor	R162,R190		2.547039	2	154078778.388085
105A561933	Resistor	R39		2.547039	1	282340674.079668
105A566519	Resistor	R463		2.547039	1	282340674.079668
105A568103	Resistor	R216		2.547039	1	282340674.079668
105A573223	Resistor	R273,R406		2.547039	2	154078778.388085
105A700003	Resistor	R212,R266,R439, R456,R570,R616, R617,R633,R641,R7, R83,R96		2.547039	12	29507083.749401

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105A700009	Resistor	R110,R133,R136, R146,R147,R151, R152,R155,R159, R160,R180,R194, R200,R211,R213, R232,R235,R251, R255,R261,R262, R263,R268,R269, R270,R280,R283, R291,R363,R364, R365,R370,R375,R38, R385,R389,R391, R450,R506,R51,R		2.547039	65	5770418.053828
105A700139	Resistor	R100,R149,R15,R169, R183,R184,R187, R229,R260,R264, R272,R277,R29,R307, R308,R310,R311, R317,R326,R330, R347,R35,R353,R359, R361,R407,R410, R417,R42,R420,R45, R46,R47,R48,R480, R491,R521,R54,R561, R622,R74,R78,R79, R82,R86,R90,R93		2.547039	47	7918121.839508



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105A701039	Resistor	R114,R129,R148, R189,R19,R191,R192, R20,R209,R210,R22, R227,R23,R233,R239, R243,R249,R256, R265,R27,R271,R275, R279,R284,R289, R295,R301,R303, R304,R306,R315, R320,R321,R340, R343,R344,R374,R41, R425,R437,R454, R461,R473,R475,		2.547039	63	5949421.035389
105A701059	Resistor	R127,R217,R242,R31, R392,R404,R596, R638		2.547039	8	43225424.698300
105A701069	Resistor	R499		2.547039	1	282340674.079668
105A702229	Resistor	R134,R143,R144, R145,R157,R164, R165,R17,R246,R287, R380,R381,R484, R485,R486,R487, R488,R489,R490, R508,R565,R81,R91, R92		2.547039	24	15190138.820515
105A702263	Resistor	R115,R373,R449, R483		2.547039	4	82309758.689546
105A703329	Resistor	R102,R549		2.547039	2	154078778.388085
105A703363	Resistor	R236		2.547039	1	282340674.079668
105A703909	Resistor	R382,R383		2.547039	2	154078778.388085
105A704334	Resistor	R24		2.547039	1	282340674.079668

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105A704729	Resistor	R16,R178,R195,R203,R247,R282,R288,R299,R300,R312,R33,R394,R397,R414,R421,R442,R448,R5,R50,R503,R520,R523,R566,R631,R9,R97		2.547039	26	14061076.827148
105A704739	Resistor	R438,R72		2.547039	2	154078778.388085
105A705139	Resistor	R28,R401,R402,R403,R464,R465,R466,R49,R511,R512,R517,R518,R519,R522,R569		2.547039	15	23852782.943395
105A706829	Resistor	R245,R248,R252,R531		2.547039	4	82309758.689546
105A708229	Resistor	R106,R117,R177,R179,R327,R429,R430,R431,R432,R433,R434,R435,R440,R458,R467,R52,R55,R56,R57,R58,R59,R60,R61,R62,R63,R64,R65,R66,R67,R68		2.547039	30	12244464.256771
105A722009	Resistor	R350,R351,R366,R367		2.547039	4	82309758.689546
105A733009	Resistor	R1,R198,R2,R3,R4		2.547039	5	67008142.102588
105A739039	Resistor	R40		2.547039	1	282340674.079668
105A747039	Resistor	R492		2.547039	1	282340674.079668
106B501032	Resistor	RT2,RT3,RT4,RT5		7.724580	4	21923287.146155

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Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1121501691	Capacitor	C101,C102,C104, C105,C106,C108,C11, C111,C112,C115, C119,C120,C122, C123,C124,C125, C126,C127,C128, C129,C13,C130,C136, C139,C14,C143,C144, C148,C154,C155, C158,C160,C161, C162,C173,C176, C178,C179,C180, C181,C186,C19,C		1.128806	168	5173420.226044
1122701680	Capacitor	C10		1.128806	1	704977644.692287
1124410191	Capacitor	C113,C225,C472, C473,C482,C483, C484		1.128806	7	115633865.771428
1124418090	Capacitor	C92,C97		1.128806	2	375289731.076049
1124427091	Capacitor	C167,C168,C190, C192,C193,C194, C387,C40,C42,C463, C464		1.128806	11	74892583.279796
1124468090	Capacitor	C39		1.128806	1	704977644.692287
1124510280	Capacitor	C247,C269		1.128806	2	375289731.076049
1124547190	Capacitor	C174,C201,C202, C203,C204,C205, C206,C274,C321		1.128806	9	90863428.080946
1129522790	Capacitor	C218,C221,C222		1.128806	3	257514172.353070

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1129622690	Capacitor	C103,C17,C299,C353,C43,C44,C77,C80,C81,C84		1.128806	10	82101057.548118
1129701791	Capacitor	C110,C114,C163,C184,C185,C198,C200,C232,C238,C239,C241,C242,C52,C58,C59,C60,C61		1.128806	17	49133303.073811
1129710091	Capacitor	C276,C277,C445,C465,C466,C467		1.128806	6	133979725.056342
1129710391	Capacitor	C209,C474		1.128806	2	375289731.076049
1174522180	Capacitor	CP1,CP10,CP11,CP12,CP13,CP2,CP3,CP8, CP9		1.128806	9	90863428.080946
1181627191	Capacitor	EC1		4.744484	1	159663026.715137
1182622080	Capacitor	TC13		4.744484	1	159663026.715137
1189615151	Capacitor	TC12,TC15,TC18,TC19,TC7		4.744484	5	36944177.000623
1189627150	Capacitor	TC10,TC14,TC16,TC9		4.744484	4	45505862.704531
1189633193	Capacitor	TC1,TC11,TC3,TC6, TC8		4.744484	5	36944177.000623
1189633196	Capacitor	TC17,TC2,TC4,TC5		4.744484	4	45505862.704531
11C1501080	Capacitor	C369		1.128806	1	704977644.692287
11C2501050	Capacitor	C4		1.128806	1	704977644.692287
11C2501790	Capacitor	C137,C98		1.128806	2	375289731.076049
11C2510480	Capacitor	C12,C22,C244,C248,C256,C262		1.128806	6	133979725.056342
11C2539290	Capacitor	C117		1.128806	1	704977644.692287
11C4401880	Capacitor	C3		1.128806	1	704977644.692287
11C4522190	Capacitor	C166,C18		1.128806	2	375289731.076049
11C4547290	Capacitor	C100,C142		1.128806	2	375289731.076049
11C4547760	Capacitor	C231		1.128806	1	704977644.692287
11C4568190	Capacitor	C49		1.128806	1	704977644.692287
11C9501050	Capacitor	C257		1.128806	1	704977644.692287
11E1510050	Capacitor	C226,C235,C27,C9		1.128806	4	196873384.410843

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Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
11E1522680	Capacitor	C252,C32		1.128806	2	375289731.076049
11E2522060	Capacitor	C270,C6		1.128806	2	375289731.076049
11E9501091	Capacitor	C1,C109,C116,C118,C138,C140,C141,C188,C189,C197,C20,C211,C212,C213,C214,C215,C216,C217,C234,C246,C254,C258,C259,C265,C266,C267,C271,C272,C278,C280,C282,C29,C305,C308,C309,C311,C312,C320,C323,C326,C327,C328,		1.128806	63	13632557.733278
11E9510050	Capacitor	C146,C147,C169,C170,C2,C23,C237,C243,C361,C362,C364,C368,C407,C447,C452,C454,C475,C57,C70		1.128806	19	44097696.883526

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11E9610080	Capacitor	C219,C249,C261, C279,C281,C293, C295,C300,C333, C336,C352,C356, C366,C397,C399, C434,C443,C45, C457, C460,C481,C54, C67, C68,C76,C78, ,C83, C88,C90		1.128806	29	29193260.380640
11E9622050	Capacitor	C315,C319,C322, C325,C346,C401, C403,C420,C468, C94		1.128806	10	82101057.548118
11E9647680	Capacitor	C107,C307,C318, C358,C405,C406		1.128806	6	133979725.056342
11E9722090	Capacitor	C16,C469,C470, C471		1.128806	4	196873384.410843
1211100113	Inductor	L10,L12,L8		4.944252	3	57363284.375370
1211100160	Inductor	L14		4.944252	1	154760964.143460
121110106M	Inductor	L7		4.944252	1	154760964.143460
121110156K	Inductor	L1,L3,L4,L5		4.944252	4	43912872.424775
121110226K	Inductor	L6		4.944252	1	154760964.143460
121110336Y	Inductor	L2		4.944252	1	154760964.143460
121110476Q	Inductor	L15,L16		4.944252	2	83201062.149749
1212306030	Inductor	FB1,FB10,FB12, FB13, FB14,FB15,F B16, FB17,FB18,F B19,FB2, FB20,FB29,F B3,FB30, FB4,FB9		4.944252	17	11096095.548648
1212306031	Inductor	FB5		4.944252	1	154760964.143460

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1212306035	Inductor	FB11,FB31,F B32, FB33,FB34,F B35, FB37,FB38,F B39		4.944252	9	20443842.451049
1212308054	Inductor	FB24,FB36		4.944252	2	83201062.149749
1214309008	Inductor	CH1,CH2,CH 3,CH4, CH5,CH6		4.944252	6	30055900.223009
123131435J	Miscellaneous	Y1		19.200000	1	23844262.770939
123132505D	Miscellaneous	Y4,Y5		19.200000	2	8854051.752197
1231327053	Miscellaneous	Y3		19.200000	1	23844262.770939
1231332721	Miscellaneous	Y2		19.200000	1	23844262.770939
1301005441	Semiconductor	D41		7.793411	1	92807310.010983
1301005442	Semiconductor	D18,D28,D8		7.793411	3	35106858.962001
1301005443	Semiconductor	D48		7.793411	1	92807310.010983
1301005444	Semiconductor	D1,D16,D4,D 5,D6		7.793411	5	21965031.404253
1301053040	Semiconductor	D14		7.793411	1	92807310.010983
1304001340	Semiconductor	D3		7.793411	1	92807310.010983
1304101340	Semiconductor	D2		7.793411	1	92807310.010983
1304300140	Semiconductor	D7		7.793411	1	92807310.010983
1305080040	Semiconductor	D13,D17,D19 ,D20, D21,D22,D23 ,D24, D25,D26,D27 ,D29, D30,D31,D32 ,D33, D34,D37,D38 ,D39, D44,D49,D50 ,D51, D52,D53,D54 ,D55		7.793411	28	4283597.273646
1305099140	Semiconductor	D35,D36		7.793411	2	50578095.223398
1310390413	Semiconductor	Q17,Q18,Q1 9,Q20, Q34,Q36,Q3 8,Q46		22.463360	8	4877097.849338
1311071710	Semiconductor	Q2		22.463360	1	31642600.748419
1311390612	Semiconductor	Q16,Q21,Q4 3		22.463360	3	12043329.789539
1315013810	Semiconductor	Q24,Q26		22.463360	2	17315095.066101
1315030110	Semiconductor	Q3,Q7		22.463360	2	17315095.066101
1315230410	Semiconductor	Q13		22.463360	1	31642600.748419
1315230511	Semiconductor	Q49		22.463360	1	31642600.748419
1315422410	Semiconductor	U28,U55,U60		22.463360	3	12043329.789539

**File Name:** AEC-6523.rfp  
**Assembly:** 9697CV0512-D  
**Ref Des:**  
**Description:**

**Failure Rate:** 6892.344944  
**MTBF (hrs):** 145,089  
**Temperature:** 30  
**Environment:** GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1315482110	Semiconductor	U36,U8,U9		22.463360	3	12043329.789539
1315482410	Semiconductor	U39		22.463360	1	31642600.748419
1315667910	Semiconductor	U19,U3,U43, U47,U48		22.463360	5	7551839.591592
1315700212	Semiconductor	Q27,Q28,Q2 9		22.463360	3	12043329.789539
1315700216	Semiconductor	Q1,Q10,Q11, Q14,Q15, Q22,Q23,Q2 5,Q30, Q31,Q32,Q3 3,Q35,Q4, Q40,Q41,Q4 2,Q44, Q48,Q5,Q6,Q 8		22.463360	22	1867312.998876
1315762010	Semiconductor	Q12,Q9		22.463360	2	17315095.066101
1315970211	Semiconductor	U15,U5,U64		22.463360	3	12043329.789539
1440N26000	Integrated Circuit	U17		21.706765	1	23689035.791249
14S2200900	Integrated Circuit	U41		43.803003	1	11739202.588727
14S2321900	Integrated Circuit	U10		43.803003	1	11739202.588727
14S2362400	Integrated Circuit	U20		43.803003	1	11739202.588727
14S2591200	Integrated Circuit	U57		43.803003	1	11739202.588727
14S3050100	Integrated Circuit	U13		43.803003	1	11739202.588727
14S3066200	Integrated Circuit	U42		43.803003	1	11739202.588727
14S3111600	Integrated Circuit	U40		43.803003	1	11739202.588727
14S3112400	Integrated Circuit	U22		43.803003	1	11739202.588727
14S3524700	Integrated Circuit	U35		43.803003	1	11739202.588727
14S3816700	Integrated Circuit	U4		43.803003	1	11739202.588727
14S4001000	Integrated Circuit	U7		43.803003	1	11739202.588727
14S4021301	Integrated Circuit	U14,U18,U23 ,U71		43.803003	4	3879156.910661
14S4048503	Integrated Circuit	U58,U63		43.803003	2	6834791.244197
14S4081110	Integrated Circuit	U49		43.803003	1	11739202.588727
14S4519500	Integrated Circuit	U51		43.803003	1	11739202.588727
14S4751100	Integrated Circuit	U44		43.803003	1	11739202.588727
14S4811102	Integrated Circuit	U32,U33		43.803003	2	6834791.244197
14S4878300	Integrated Circuit	U21		43.803003	1	11739202.588727
14S5912300	Integrated Circuit	U52		26.018600	1	25551442.237972
14S5920400	Integrated Circuit	U67,U70		26.018600	2	14194252.866846
14S5A00601	Integrated Circuit	U24		26.018600	1	25551442.237972
14S5A00821	Integrated Circuit	U1,U34,U46, U50,U6		26.018600	5	6292206.574138
14S5A12503	Integrated Circuit	U27		26.018600	1	25551442.237972
14S5A12506	Integrated Circuit	U26		26.018600	1	25551442.237972
14S5A73200	Integrated Circuit	U12		26.018600	1	25551442.237972
14S6203204	Integrated Circuit			11.063278	1	58231413.220643
14S6366B00	Integrated Circuit	U68,U69		43.803003	2	6834791.244197



**File Name:** AEC-6523.rfp  
**Assembly:** 9697CV0512-D  
**Ref Des:**  
**Description:**

**Failure Rate:** 6892.344944  
**MTBF (hrs):** 145,089  
**Temperature:** 30  
**Environment:** GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
14S9811500	Integrated Circuit	U53		43.803003	1	11739202.588727
1540710280	Resistor	RP1,RP2		9.971436	2	30043399.401299
1540733085	Resistor	RP4,RP5,RP6		9.971436	3	21639329.074793
1540782282	Resistor	RP3		9.971436	1	51606907.671214
16515A2990	Connection	DIMM1		16.184835	1	35685591.360212
165251420B	Connection	CN28,CN29		16.184835	2	20390152.380746
165260210A	Connection	CN6		16.184835	1	35685591.360212
1652602208	Connection	CN6		16.184835	1	35685591.360212
1653003101	Connection	JP1,JP10,JP1 1,JP2, JP9		16.184835	5	9343344.843761
1653003201	Connection	JP3		16.184835	1	35685591.360212
1653005201	Connection	CN1		16.184835	1	35685591.360212
165320520G	Connection	CN7		16.184835	1	35685591.360212
1653212100	Connection	CN17		16.184835	1	35685591.360212
1653300102	Connection	JP1(2-3)ATX, JP10(1-2)		16.184835	2	20390152.380746
1653300107	Connection	JP11(2- 3),JP3(3-4), JP9(2-3)		16.184835	3	14515880.849373
1653300108	Connection	JP2(1-2)		16.184835	1	35685591.360212
165390003B	Connection	CFD1B		16.184835	1	35685591.360212
1653924110	Connection	CFD1A		16.184835	1	35685591.360212
1654030003	Connection	CN27		16.184835	1	35685591.360212
1654226303	Connection	PCIE1A		16.184835	1	35685591.360212
1654409103	Connection	CN33		16.184835	1	35685591.360212
1654415308	Connection	CN32		16.184835	1	35685591.360212
1654808309	Connection	CN30		16.184835	1	35685591.360212
1654903901	Connection	CN34		16.184835	1	35685591.360212
1654907004	Connection	CN5		16.184835	1	35685591.360212
1654926900	Connection	PCIE1B		16.184835	1	35685591.360212
1655003010	Connection	CN3		16.184835	1	35685591.360212
1655003022	Connection	CN2		16.184835	1	35685591.360212
1655302020	Connection	CN9		16.184835	1	35685591.360212
1655305020	Connection	CN26		16.184835	1	35685591.360212
1655306020	Connection	CN4		16.184835	1	35685591.360212
1655306023	Connection	CN23		16.184835	1	35685591.360212
1655902030	Connection	BAT1A		16.184835	1	35685591.360212
1655905032	Connection	CN10,CN12,C N14, CN15		16.184835	4	11344857.509064
1655909031	Connection	CN16,CN18,C N19		16.184835	3	14515880.849373
1655910131	Connection	CN31		16.184835	1	35685591.360212
175011901M	Miscellaneous	BAT1B		306.000000	1	1681683.006787
1752000501	Miscellaneous	FS2		2.400000	1	254626042.602335
1752001603	Miscellaneous	FS1,FS3		2.400000	2	143944727.196625

File Name: AEC-6523.rfp  
 Assembly: 9697P21D00-D  
 Ref Des:  
 Description:

Failure Rate: 583.274452  
 MTBF (hrs): 1,714,459  
 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		4.944252	1	154760964.143460
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-6523.rfp  
**Assembly:** 9697P21D00-D  
**Ref Des:**  
**Description:**

**Failure Rate:** 583.274452  
**MTBF (hrs):** 1,714,459  
**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