

# FWS-2276

## Reliability Prediction Report (MTBF)

Summary	Failure Rate: 6024.109137 MTBF: 166,000 Hours
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Issue date	QE Manager	Test Engineer
2018-06-20	KJ Wang	Louie Lee

# Reliability Prediction (MTBF)

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**I . Model Name:** FWS-2276

**II . Prediction Date:** June. 20th, 2018

**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:**

FWS-2276 (M/B: 9697227601-D):

- Failure Rate: 6024.109137

- MTBF: 166,000 Hours

**AAEON Reliability Prediction  
Summary**

**File Name:** FWS-2276.rfp  
**Duty Cycle:** 100  
**Calculation Model:** Telcordia Issue 2  
**Method:** Method I Case 3

**Failure Rate:** 6024.109137  
**MTBF (hrs):** 166,000  
**Temperature:** 30  
**Environment:** GF, GU - Ground Fixed, Uncontrolled

Assembly Name	Part Number	Ref Des	Quantity	Failure Rate	MTBF
FWS-2276	9697227601-D		1	6024.109137	166,000

**File Name:** FWS-2276.rfp  
**Assembly:** 9697227601-D  
**Ref Des:**  
**Description:**

**Failure Rate:** 6024.109137  
**MTBF (hrs):** 166,000  
**Temperature:** 30  
**Environment:** GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1050500104	Resistor	R176,R565,R569, R660		2.547039	4	82309758.689546
1050501064	Resistor	R248		2.547039	1	282340674.079668
1050501634	Resistor	R449		2.547039	1	282340674.079668
1050502004	Resistor	R1298,R1299,R494, R597		2.547039	4	82309758.689546
1050502204	Resistor	R161,R478		2.547039	2	154078778.388085
1050502224	Resistor	R1476,R225,R226,R36,R38,R443,R549,R559,R579,R671, R672		2.547039	11	32049696.385471
1050503324	Resistor	R101,R109,R1479,R169,R259,R274,R540,R541,R547,R548,R612,R633,R634,R636,R637,R639,R642,R643,R82,R83		2.547039	20	18104712.511396
1050503334	Resistor	R122,R133,R147,R222,R223,R228,R553,R570,R673		2.547039	9	38754445.632391
1050503634	Resistor	R806		2.547039	1	282340674.079668
1050504724	Resistor	R12,R14,R1404,R1405,R1406,R153,R16,R288,R289,R338,R488,R508,R646,R711,R714,R721,R723,R726,R740, R743		2.547039	20	18104712.511396
1050504724-00	Resistor	R181,R631,R764		2.547039	3	107020754.986850
1050504734-00	Resistor	R551,R659		2.547039	2	154078778.388085
1050505634-00	Resistor	R299		2.547039	1	282340674.079668
1050506224	Resistor	R1475		2.547039	1	282340674.079668

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Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1050508224	Resistor	R1313,R1314 ,R361, R370		2.547039	4	82309758.689546
1050510034	Resistor	R154,R298,R 317, R336,R344,R 454, R491,R566,R 594		2.547039	9	38754445.632391
1050510504	Resistor	R141,R142		2.547039	2	154078778.388085
1050510524	Resistor	R706		2.547039	1	282340674.079668
1050511304	Resistor	R421		2.547039	1	282340674.079668
1050512034-00	Resistor	R309		2.547039	1	282340674.079668
1050512734	Resistor	R514		2.547039	1	282340674.079668
1050513704	Resistor	R420		2.547039	1	282340674.079668
1050515834	Resistor	R282		2.547039	1	282340674.079668
1050516004	Resistor	R351,R352,R 787, R788,R790,R 791, R794,R795		2.547039	8	43225424.698300
1050516524	Resistor	R179		2.547039	1	282340674.079668
1050517804	Resistor	R477,R582		2.547039	2	154078778.388085
1050520004	Resistor	R145,R231,R 238		2.547039	3	107020754.986850
1050520034	Resistor	R131,R227		2.547039	2	154078778.388085
1050521024	Resistor	R534		2.547039	1	282340674.079668
1050522004	Resistor	R468		2.547039	1	282340674.079668
1050522124	Resistor	R173		2.547039	1	282340674.079668
1050524004	Resistor	R506,R507,R 652, R653		2.547039	4	82309758.689546
1050524904	Resistor	R47,R785		2.547039	2	154078778.388085
1050527034	Resistor	R461		2.547039	1	282340674.079668
1050528734	Resistor	R159		2.547039	1	282340674.079668
1050531614	Resistor	R502		2.547039	1	282340674.079668
1050531624	Resistor	R160		2.547039	1	282340674.079668
1050533034	Resistor	R218,R703,R 802		2.547039	3	107020754.986850
1050533204	Resistor	R152,R162		2.547039	2	154078778.388085
1050536514	Resistor	R51,R54,R78 1,R782		2.547039	4	82309758.689546
1050540204	Resistor	R463,R55,R5 7		2.547039	3	107020754.986850
1050547004	Resistor	R1387,R1389 ,R356		2.547039	3	107020754.986850

**Reliability Prediction  
Summary**

**File Name:** FWS-2276.rfp  
**Assembly:** 9697227601-D  
**Ref Des:**  
**Description:**

**Failure Rate:** 6024.109137  
**MTBF (hrs):** 166,000  
**Temperature:** 30  
**Environment:** GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1050549924	Resistor	R1318,R1319 ,R1320, R1321,R1322 ,R1323, R1324,R1325 ,R1326		2.547039	9	38754445.632391
1050573214	Resistor	R509		2.547039	1	282340674.079668
1050580614	Resistor	R658		2.547039	1	282340674.079668
1050582504	Resistor	R500		2.547039	1	282340674.079668
1050588724	Resistor	R568		2.547039	1	282340674.079668
1050593104	Resistor	R489		2.547039	1	282340674.079668
1050708234	Resistor	R648		2.547039	1	282340674.079668
1059700001	Resistor	R1335,R195, R342, R44		2.547039	4	82309758.689546
105A500103	Resistor	R335,R555,R 625,R67, R674		2.547039	5	67008142.102588
105A500139	Resistor	R1384,R260, R261, R343,R58,R6 18,R620, R621,R759,R 776		2.547039	10	35079934.879747
105A501039	Resistor	R138,R1432, R1433, R1434,R1435 ,R1436, R1437,R1440 ,R1441, R163,R280,R 306, R345,R366,R 367, R373,R387,R 400, R401,R405,R 406, R408,R409,R 471, R472,R473,R 512, R516,R519,R 520, R521,R522,R 523, R524,R525,R 528, R554,R613,R 615, R616,R63,R6 56,R661, R757,R807		2.547039	45	8260575.675294

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105A501323	Resistor	R1386,R588		2.547039	2	154078778.388085
105A501529	Resistor	R501		2.547039	1	282340674.079668
105A501539	Resistor	R139,R1480, R273		2.547039	3	107020754.986850
105A502039	Resistor	R150,R18,R2 1,R417, R804,R805		2.547039	6	56573956.677649
105A502263	Resistor	R199,R313,R 447,R77		2.547039	4	82309758.689546
105A503039	Resistor	R614,R86		2.547039	2	154078778.388085
105A503309	Resistor	R1247,R1251 ,R1252, R1272,R341, R433, R464,R511,R 517		2.547039	9	38754445.632391
105A505109	Resistor	R108,R115,R 79,R93		2.547039	4	82309758.689546
105A506829	Resistor	R312,R571,R 69		2.547039	3	107020754.986850
105A508233	Resistor	R758		2.547039	1	282340674.079668
105A510009	Resistor	R208,R210,R 492, R595,R78,R7 99,R88, R89,R92,R94		2.547039	10	35079934.879747
105A515009	Resistor	R1396,R1397		2.547039	2	154078778.388085
105A516903	Resistor	R499		2.547039	1	282340674.079668
105A519133	Resistor	R311		2.547039	1	282340674.079668
105A521039	Resistor	R310		2.547039	1	282340674.079668
105A526114	Resistor	R729		2.547039	1	282340674.079668
105A532429	Resistor	R578		2.547039	1	282340674.079668
105A534823	Resistor	R189		2.547039	1	282340674.079668
105A538323	Resistor	R66		2.547039	1	282340674.079668
105A549919	Resistor	R185,R628,R 763, R767		2.547039	4	82309758.689546
105A553629	Resistor	R552		2.547039	1	282340674.079668
105A560469	Resistor	R95		2.547039	1	282340674.079668
105A562034	Resistor	R407		2.547039	1	282340674.079668
105A576813	Resistor	R484		2.547039	1	282340674.079668
105A700003	Resistor	R167,R2,R25 4,R277, R319,R32,R4 0,R41, R42,R43,R46 ,R483, R64,R74,R77 8,R85, R97		2.547039	17	21160422.299251



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**Ref Des:**  
**Description:**

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**MTBF (hrs):** 166,000  
**Temperature:** 30  
**Environment:** GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
105A700009	Resistor	R113,R114,R1224, R124,R1273, R1304, R1306,R136, R1438, R1439,R203, R207, R209,R262,R269, R270,R3,R318, R320, R339,R349,R350, R357,R359,R374, R375,R4,R441, R444, R493,R498,R518, R557,R567,R596, R610,R680,R690, R698,R733,R780, R797,R801,R803, R90		2.547039	45	8260575.675294
105A70000A	Resistor	R177,R188,R190, R234,R316,R368, R45, R513,R535,R607, R730		2.547039	11	32049696.385471
105A700139	Resistor	R184,R206,R281, R292,R294,R304, R314,R630,R768		2.547039	9	38754445.632391
105A701009	Resistor	R430,R432		2.547039	2	154078778.388085

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105A701039	Resistor	R106,R11,R118, R1228,R1241, R1244, R1332,R148, R15, R151,R164,R166, R168,R175,R182, R193,R217,R239, R249,R251,R256, R258,R271,R295, R296,R495,R5,R560, R573,R576,R601, R602,R605,R611, R627,R632,R654, R662,R664,R668, R678,R679,R683, R685,R686,R694, R701,R720, R482		2.547039	56	6674742.756943
105A701069	Resistor	R482		2.547039	1	282340674.079668
105A702269	Resistor	R155,R490		2.547039	2	154078778.388085
105A703309	Resistor	R174,R626,R732, R765		2.547039	4	82309758.689546
105A703329	Resistor	R279,R285,R640, R771		2.547039	4	82309758.689546
105A704729	Resistor	R105,R110,R129, R196,R197,R20,R204, R22,R35,R354,R355, R769,R770,R773,R84		2.547039	15	23852782.943395
105A705129	Resistor	R1478,R800		2.547039	2	154078778.388085
105A706809	Resistor	R469		2.547039	1	282340674.079668
105A708209	Resistor	R475		2.547039	1	282340674.079668
105A710009	Resistor	R10,R39,R48,R49, R50,R56		2.547039	6	56573956.677649
105A710039	Resistor	R107,R453		2.547039	2	154078778.388085

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Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
105A715003	Resistor	R37		2.547039	1	282340674.079668
105A715009	Resistor	R116,R117,R13, R1302,R390, R391, R392,R393,R394, R395,R396,R397, R398,R61		2.547039	14	25477245.255648
105A716533	Resistor	R221		2.547039	1	282340674.079668
105A733009	Resistor	R786,R789,R792, R793		2.547039	4	82309758.689546
105B701009	Resistor	R422,R423,R424, R425,R426,R427, R428,R429,R431		2.547039	9	38754445.632391
106B510034	Resistor	RT3,RT4		7.724580	2	38596617.434771
106B704723	Resistor	RT1,RT2		7.724580	2	38596617.434771
106BA01033	Resistor	R112,R68		7.724580	2	38596617.434771
1112647190	Capacitor	C871		4.744484	1	159663026.715137
1121415090	Capacitor	C320		1.128806	1	704977644.692287
1121501690	Capacitor	C10,C12,C192,C197, C203,C254,C258, C265,C300,C301, C302,C303,C304, C305,C306,C307, C308,C309,C310, C311,C323,C393, C394,C396,C397, C467,C468,C82,C83, C84,C848,C849,C85, C852,C853		1.128806	35	24285352.591796
1122522890	Capacitor	C18,C181,C36,C453		1.128806	4	196873384.410843
1124418090	Capacitor	C222,C223		1.128806	2	375289731.076049

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1124418190	Capacitor	C259,C462,C463, C464,C465,C466, C469,C470		1.128806	8	101746760.035398
1124427090	Capacitor	C149,C173,C378, C382,C415,C416, C423,C424		1.128806	8	101746760.035398
1124433190	Capacitor	C480		1.128806	1	704977644.692287
1124468090	Capacitor	C295,C344,C390		1.128806	3	257514172.353070
1124522290	Capacitor	C399,C68		1.128806	2	375289731.076049
1124533280	Capacitor	C263,C353,C398, C409,C63,C869		1.128806	6	133979725.056342
1124539180	Capacitor	C401		1.128806	1	704977644.692287
1124547190	Capacitor	C340		1.128806	1	704977644.692287
1129522790	Capacitor	C865,C866		1.128806	2	375289731.076049
1129610080	Capacitor	C111,C114,C115, C129,C144,C191, C204,C205,C207, C208,C226,C227, C333,C341,C342, C359,C360,C370, C374,C377,C388, C389,C449		1.128806	23	36609385.175833
1129610260	Capacitor	C457,C458,C459, C460		1.128806	4	196873384.410843
1129701690	Capacitor	C273,C338,C339, C352,C354,C369, C371,C380,C381, C403,C405,C408, C472,C473,C479		1.128806	15	55479656.844874
1129701790	Capacitor	C269,C6,C7,C8,C9		1.128806	5	159367490.199266
1129722091	Capacitor	C425,C474		1.128806	2	375289731.076049

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1189656196	Capacitor	C157,C262,C270		4.744484	3	59399119.141203
1189682199	Capacitor	C101		4.744484	1	159663026.715137
118C639191	Capacitor	C201,C87		4.744484	2	86049450.747498
11A4310040	Capacitor	C100,C112		1.128806	2	375289731.076049
11C1410440	Capacitor	C324,C368,C69		1.128806	3	257514172.353070
11C1501050	Capacitor	C268		1.128806	1	704977644.692287
11C1539840	Capacitor	C110,C373,C411, C412		1.128806	4	196873384.410843
11C1547890	Capacitor	C312		1.128806	1	704977644.692287
11C1647780	Capacitor	C331,C361,C402		1.128806	3	257514172.353070
11C2510480	Capacitor	C145,C213,C322, C330,C446		1.128806	5	159367490.199266
11C2522480	Capacitor	C14,C3		1.128806	2	375289731.076049
11C4501790	Capacitor	C410,C475		1.128806	2	375289731.076049
11C4510240	Capacitor	C256,C421		1.128806	2	375289731.076049
11C4556690	Capacitor	C428		1.128806	1	704977644.692287

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11C9510490	Capacitor	C113,C123,C124, C130,C131,C142, C143,C150,C160, C164,C165,C166, C167,C168,C169, C170,C175,C187, C188,C202,C210, C212,C214,C215, C216,C218,C220, C221,C229,C232, C236,C237,C238, C239,C240,C241, C242,C243,C244, C245,C247,C248, C249,C345,C346, C386,C392,C395,		1.128806	68	12644624.424143
11E1501040	Capacitor	C140,C299,C422		1.128806	3	257514172.353070
11E1510050	Capacitor	C1,C183,C266		1.128806	3	257514172.353070
11E1522680	Capacitor	C162,C264,C325, C452,C461		1.128806	5	159367490.199266
11E1547650	Capacitor	C11,C2,C429		1.128806	3	257514172.353070
11E2501080	Capacitor	C198,C72		1.128806	2	375289731.076049

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11E2501690	Capacitor	C127,C141,C209,C25,C26,C261,C267,C326,C327,C328,C332,C362,C367,C376,C383,C384,C385,C413,C45,C456,C59,C861,C863,C864		1.128806	24	35120617.936543
11E2510010	Capacitor	C260,C329,C372,C4,C414,C454,C455,C47		1.128806	8	101746760.035398
11E4433090	Capacitor	C67		1.128806	1	704977644.692287
11E4510440	Capacitor	C251		1.128806	1	704977644.692287
11E9610080	Capacitor	C139		1.128806	1	704977644.692287
11E9622050	Capacitor	C109,C132,C151,C152,C159,C163,C178,C193,C194,C200,C206,C217,C230,C246,C253,C290,C30,C32,C33,C34,C357,C363,C364,C366,C379,C387,C391,C50,C76,C77,C96,C97,C98		1.128806	33	25726061.200507
11E9622052	Capacitor	C404,C471		1.128806	2	375289731.076049
11E9622080	Capacitor	C174,C177,C19,C211,C219,C27,C271,C28,C321,C406,C407,C477,C478,C74		1.128806	14	59316298.011235
11EA610040	Capacitor	C73,C854		1.128806	2	375289731.076049
11EA647010	Capacitor	C128,C153,C171,C868		1.128806	4	196873384.410843

File Name: FWS-2276.rfp  
 Assembly: 9697227601-D  
 Ref Des:  
 Description:

Failure Rate: 6024.109137  
 MTBF (hrs): 166,000  
 Temperature: 30  
 Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
11EB501040	Capacitor	C103,C104,C105, C106,C107,C108, C116,C117,C118, C119,C120,C121, C122,C13,C133,C134, C135,C136,C137, C138,C148,C154, C155,C156,C158, C161,C172,C176, C179,C180,C182, C184,C190,C20,C231, C252,C275,C343, C348,C35,C350,C375, C447,C448,C49,C5, C58,C60,C61,C65,		1.128806	59	14541999.022292
11EB522011	Capacitor	C199		1.128806	1	704977644.692287
11EB547440	Capacitor	C147		1.128806	1	704977644.692287
11EB610050	Capacitor	C257		1.128806	1	704977644.692287
121110156P	Inductor	L2		4.944252	1	154760964.143460
121110226Y	Inductor	L5,L7		4.944252	2	83201062.149749
1211104271	Inductor	L3		4.944252	1	154760964.143460
1211106879	Inductor	L1		4.944252	1	154760964.143460
1211147071	Inductor	L4,L6		4.944252	2	83201062.149749
1212312063	Inductor	FB1,FB10,FB11,FB4, FB9		4.944252	5	35631881.582999
12123A000E	Inductor	FB3,FB5		4.944252	2	83201062.149749
12123C000A	Inductor	FB2,FB6		4.944252	2	83201062.149749
12123C000E	Inductor	FB12		4.944252	1	154760964.143460
1214109007	Inductor	CH1,CH2,CH5,CH6		4.944252	4	43912872.424775
12143B0002	Inductor	CH3,CH4		4.944252	2	83201062.149749
12310025AB	Miscellaneous	Y3,Y5,Y6,Y7		19.200000	4	4388233.395340
1231019251	Miscellaneous	Y2		19.200000	1	23844262.770939
1231332726	Miscellaneous	Y4		19.200000	1	23844262.770939
12330024A1	Miscellaneous	Y1		19.200000	1	23844262.770939



**File Name:** FWS-2276.rfp  
**Assembly:** 9697227601-D  
**Ref Des:**  
**Description:**

**Failure Rate:** 6024.109137  
**MTBF (hrs):** 166,000  
**Temperature:** 30  
**Environment:** GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1252350090	Inductor	TF1,TF2,TF3,TF4		4.944252	4	43912872.424775
1301053040	Semiconductor	D4,D5		7.793411	2	50578095.223398
1301400642	Semiconductor	D6		7.793411	1	92807310.010983
1304001120	Optical Device	LED1		79.003355	1	6497172.749112
1304001121	Optical Device	LED6		79.003355	1	6497172.749112
1304001122	Optical Device	LED2,LED3,LED4, LED5		79.003355	4	2148119.082046
1305001242	Semiconductor	D7		7.793411	1	92807310.010983
1305100541	Semiconductor	U12,U13,U14,U15		22.463360	4	9270607.712006
1310390410	Semiconductor	Q5		22.463360	1	31642600.748419
1310390412	Semiconductor	Q124		22.463360	1	31642600.748419
1310390413	Semiconductor	Q27		22.463360	1	31642600.748419
1315000530	Semiconductor	Q127,Q128		22.463360	2	17315095.066101
1315009210	Semiconductor	Q40		22.463360	1	31642600.748419
1315200312	Semiconductor	Q16,Q23,Q24,Q32,Q41,Q42,Q43,Q44,Q9		22.463360	9	4366472.106532
1315443512	Semiconductor	Q26		22.463360	1	31642600.748419
1315700211	Semiconductor	Q20		22.463360	1	31642600.748419
1315700217	Semiconductor	Q4,Q6		22.463360	2	17315095.066101
1315EM6K10	Semiconductor	Q1,Q12,Q125,Q126,Q137,Q138,Q139,Q140,Q15,Q17,Q18,Q19,Q2,Q22,Q28,Q29,Q3,Q30,Q33,Q34,Q35,Q37,Q39,Q58,Q8		22.463360	25	1651126.285093
1315EMB090	Semiconductor	Q10		22.463360	1	31642600.748419
1430012821	Integrated Circuit	U4		43.803003	1	11739202.588727
1430036010	Integrated Circuit	U24,U29		43.803003	2	6834791.244197
1430080650	Integrated Circuit	U32,U36		43.803003	2	6834791.244197
1430082480	Integrated Circuit	U21		43.803003	1	11739202.588727
14308239B0	Integrated Circuit	U8		43.803003	1	11739202.588727
1440002130	Integrated Circuit	U35		43.803003	1	11739202.588727
1440211AT0	Integrated Circuit	U28,U30,U31,U5		43.803003	4	3879156.910661
1440N33500	Integrated Circuit	U27		21.706765	1	23689035.791249
145901G080	Integrated Circuit	U51		26.018600	1	25551442.237972
1462251281	Integrated Circuit			11.063278	1	58231413.220643
1462V045Q0	Integrated Circuit	U34		11.063278	1	58231413.220643
1468K4F8E1	Integrated Circuit	U60,U61		11.063278	2	32567094.099626

**File Name:** FWS-2276.rfp  
**Assembly:** 9697227601-D  
**Ref Des:**  
**Description:**

**Failure Rate:** 6024.109137  
**MTBF (hrs):** 166,000  
**Temperature:** 30  
**Environment:** GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1469KS08G0	Integrated Circuit	U17		11.063278	1	58231413.220643
1482640HC1	Integrated Circuit	U64		43.803003	1	11739202.588727
149TS01040	Integrated Circuit	U58,U59		43.803003	2	6834791.244197
14S3104500	Integrated Circuit	U11,U16		43.803003	2	6834791.244197
14S4081102	Integrated Circuit	U10,U48,U63		43.803003	3	4923240.069161
14S4872800	Integrated Circuit	U62		43.803003	1	11739202.588727
14S5912300	Integrated Circuit	U9		26.018600	1	25551442.237972
14S5974741	Integrated Circuit	U22,U50		26.018600	2	14194252.866846
1540710382	Resistor	RP12,RP13,R P14, RP15		9.971436	4	17049357.262242
1540733085	Resistor	RP21,RP22,R P23, RP24		9.971436	4	17049357.262242
1540775082	Resistor	RP1,RP2,RP3 ,RP4		9.971436	4	17049357.262242
1540782280	Resistor	RP11		9.971436	1	51606907.671214
1601006BR0	Connection	SW2		16.184835	1	35685591.360212
165250320K	Connection	CN21		16.184835	1	35685591.360212
165280820B	Connection	CON1		16.184835	1	35685591.360212
1652848206	Connection	CN16		16.184835	1	35685591.360212
1653003101	Connection	CN2,CN29		16.184835	2	20390152.380746
165300420Q	Connection	CN11		16.184835	1	35685591.360212
165330010E	Connection	CN2(1-2)		16.184835	1	35685591.360212
1654801832	Connection	CN15		16.184835	1	35685591.360212
165490700G	Connection	CN5		16.184835	1	35685591.360212
1655004011	Connection	CN4		16.184835	1	35685591.360212
1655004018	Connection	CPU_FAN1		16.184835	1	35685591.360212
1655802020	Connection	CN30		16.184835	1	35685591.360212
1655912032	Connection	LPC1		16.184835	1	35685591.360212
1750113019	Miscellaneous	CN30		306.000000	1	1681683.006787
1751300005	Relay	RELAY1,REL AY2, RELAY3,REL AY4, RELAY5,REL AY6, RELAY7,REL AY8		19.477355	8	5034355.129363
1752002500	Miscellaneous	FS2		2.400000	1	254626042.602335