

BOXER-6616

Reliability Prediction Report (MTBF)

Summary	Failure Rate: 7963.571443 MTBF: 125,572 Hours
---------	--

Issue date	QE Manager	Test Engineer
2017-10-17	KJ Wang	Jack Huang

Reliability Prediction (MTBF)

I . Model Name: BOXER-6616

II . Prediction Date: October. 17, 2017

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

IV . Predicted by: Jack Huang

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:

BOXER-6616 (M/B: 9697APL204-D):

- Failure Rate: 7963.571443

- MTBF: 125,572 Hours

File Name: BOXER-6616.rfp
Assembly: 9697APL204-D
Ref Des:
Description:

Failure Rate: 7963.571443
MTBF (hrs): 125,572
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1050500104	Resistor	R1276,R1281 ,R1316, R1321		2.547039	4	82309758.689546
1050502004	Resistor	R1236,R1237 ,R1238, R1239,R1265 ,R1305, R54,R55,R58 ,R59		2.547039	10	35079934.879747
1050502204	Resistor	R1274,R1313		2.547039	2	154078778.388085
1050503334	Resistor	R1282		2.547039	1	282340674.079668
1050504334	Resistor	R1380		2.547039	1	282340674.079668
1050504724	Resistor	R1296,R1327 ,R1417, R433,R549		2.547039	5	67008142.102588
1050504734-00	Resistor	R1280,R1320		2.547039	2	154078778.388085
1050505124	Resistor	R1431		2.547039	1	282340674.079668
1050505164	Resistor	R1332		2.547039	1	282340674.079668
1050505633	Resistor	R1355		2.547039	1	282340674.079668
1050505634-00	Resistor	R1381		2.547039	1	282340674.079668
1050507524	Resistor	R1346		2.547039	1	282340674.079668
1050508224	Resistor	R1333,R1342		2.547039	2	154078778.388085
1050510024	Resistor	R1432		2.547039	1	282340674.079668
1050510034	Resistor	R1273,R1279 ,R1312, R1336,R1341 ,R1343, R1362,R1383 ,R1384, R588		2.547039	10	35079934.879747
1050510504	Resistor	R1		2.547039	1	282340674.079668
1050511304	Resistor	R37		2.547039	1	282340674.079668
1050512104	Resistor	R329		2.547039	1	282340674.079668
1050512734	Resistor	R1259		2.547039	1	282340674.079668
1050516014	Resistor	R1258		2.547039	1	282340674.079668
1050516524	Resistor	R1311		2.547039	1	282340674.079668
1050520004	Resistor	R126,R44,R9 2		2.547039	3	107020754.986850
1050520034	Resistor	R104		2.547039	1	282340674.079668
1050521024	Resistor	R1287		2.547039	1	282340674.079668
1050522004	Resistor	R713		2.547039	1	282340674.079668
1050522124	Resistor	R1309		2.547039	1	282340674.079668
1050528734	Resistor	R1297		2.547039	1	282340674.079668
1050531624	Resistor	R1304		2.547039	1	282340674.079668
1050533034	Resistor	R1347,R1354		2.547039	2	154078778.388085
1050533204	Resistor	R1319,R1324		2.547039	2	154078778.388085
1050536514	Resistor	R153,R156,R 157, R159		2.547039	4	82309758.689546

File Name: BOXER-6616.rfp
Assembly: 9697APL204-D
Ref Des:
Description:

Failure Rate: 7963.571443
MTBF (hrs): 125,572
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1050540204	Resistor	R10,R8,R9		2.547039	3	107020754.986850
1050551124	Resistor	R1348		2.547039	1	282340674.079668
1050573214	Resistor	R1270		2.547039	1	282340674.079668
1050580614	Resistor	R1307		2.547039	1	282340674.079668
1050582504	Resistor	R1292		2.547039	1	282340674.079668
1050588724	Resistor	R1267		2.547039	1	282340674.079668
1050593104	Resistor	R1295		2.547039	1	282340674.079668
1050700002	Resistor	R495		2.547039	1	282340674.079668
1050703334	Resistor	R281,R323		2.547039	2	154078778.388085
1050708234	Resistor	R1323,R1382		2.547039	2	154078778.388085
1053500282	Resistor	R1386		2.547039	1	282340674.079668
1054500589	Resistor	R1396		2.547039	1	282340674.079668
1059520001	Resistor	R632		2.547039	1	282340674.079668
1059700001	Resistor	R245,R287		2.547039	2	154078778.388085
1059710001	Resistor	R633		2.547039	1	282340674.079668
105A500103	Resistor	R1293,R1318 ,R1368, R1369		2.547039	4	82309758.689546
105A500139	Resistor	R1376,R1378 ,R431, R434,R583,R 586		2.547039	6	56573956.677649
105A500173	Resistor	R141,R142,R 146, R147,R148		2.547039	5	67008142.102588
105A500239	Resistor	R432		2.547039	1	282340674.079668
105A501003	Resistor	R213		2.547039	1	282340674.079668
105A501039	Resistor	R1283,R1286 ,R1294, R1325,R1326 ,R1373, R1374,R1390 ,R1391, R1397,R1398 ,R1405, R1406,R166, R484, R610,R611,R 619, R637		2.547039	19	19019185.781770
105A501323	Resistor	R1308		2.547039	1	282340674.079668
105A501523	Resistor	R706		2.547039	1	282340674.079668
105A501529	Resistor	R1268		2.547039	1	282340674.079668
105A501539	Resistor	R1370		2.547039	1	282340674.079668
105A501829	Resistor	R176,R177		2.547039	2	154078778.388085
105A502039	Resistor	R429,R430,R 483, R485		2.547039	4	82309758.689546
105A502263	Resistor	R1277,R1317 ,R1363		2.547039	3	107020754.986850
105A506829	Resistor	R1371		2.547039	1	282340674.079668

File Name: BOXER-6616.rfp
Assembly: 9697APL204-D
Ref Des:
Description:

Failure Rate: 7963.571443
MTBF (hrs): 125,572
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
105A507509	Resistor	R179,R180,R181, R182,R183,R184		2.547039	6	56573956.677649
105A510009	Resistor	R1272,R1284,R1289, R1310,R1328,R1331		2.547039	6	56573956.677649
105A510223	Resistor	R1344		2.547039	1	282340674.079668
105A511513	Resistor	R1394		2.547039	1	282340674.079668
105A513003	Resistor	R575		2.547039	1	282340674.079668
105A513323	Resistor	R1353		2.547039	1	282340674.079668
105A515009	Resistor	R11,R12,R21,R352		2.547039	4	82309758.689546
105A516903	Resistor	R1262,R1301,R711		2.547039	3	107020754.986850
105A524963	Resistor	R330		2.547039	1	282340674.079668
105A528723	Resistor	R1361		2.547039	1	282340674.079668
105A532429	Resistor	R1303		2.547039	1	282340674.079668
105A534823	Resistor	R1322		2.547039	1	282340674.079668
105A536529	Resistor	R1360		2.547039	1	282340674.079668
105A547003	Resistor	R634,R635		2.547039	2	154078778.388085
105A549919	Resistor	R275,R317		2.547039	2	154078778.388085
105A553629	Resistor	R1256		2.547039	1	282340674.079668
105A560469	Resistor	R31		2.547039	1	282340674.079668
105A562034	Resistor	R1337		2.547039	1	282340674.079668
105A576813	Resistor	R1257		2.547039	1	282340674.079668
105A590963	Resistor	R1395		2.547039	1	282340674.079668
105A700003	Resistor	R1291,R1314,R1334, R1335,R1338,R1339, R1340,R1364,R1365, R1399,R143,R144, R145,R178,R257, R260,R299,R302, R356,R369,R377, R479,R491		2.547039	23	15826261.230290

**Reliability Prediction
Summary**

File Name: BOXER-6616.rfp
Assembly: 9697APL204-D
Ref Des:
Description:

Failure Rate: 7963.571443
MTBF (hrs): 125,572
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
105A700009	Resistor	R113,R115,R116, R118,R1235, R1266, R1271,R1278, R1285, R1288,R130, R1306, R1329,R1330, R1350, R1351,R1357, R1358, R1372,R138, R1388, R1389,R1393, R1400, R1402,R1404, R1415, R1419,R1425, R1429, R1430,R1435, R1438, R161,R163,R192, R22,R224,R23,R248, R267, R285,R290,R3		2.547039	62	6043178.840887
105A70000A	Resistor	R1366,R1367		2.547039	2	154078778.388085
105A700139	Resistor	R108,R1247, R1269, R128,R160,R259, R301,R357,R400, R630,R642,R647, R709,R72,R74,R99		2.547039	16	22425139.809646

File Name: BOXER-6616.rfp
Assembly: 9697APL204-D
Ref Des:
Description:

Failure Rate: 7963.571443
MTBF (hrs): 125,572
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
105A701039	Resistor	R100,R101,R103, R106,R1240, R1241, R1242,R1243 ,R1244, R1245,R1246 ,R1248, R1254,R1255 ,R127, R133,R136,R151, R152,R155,R165, R168,R169,R174, R185,R191,R196, R214,R217,R220, R253,R255,R256, R261,R262,R263, R264,R265,R266, R268,R269,R270, R271,R272,R273, R274,		2.547039	115	3298100.613830
105A701059	Resistor	R167,R171,R209, R358,R367		2.547039	5	67008142.102588
105A701069	Resistor	R105		2.547039	1	282340674.079668
105A702039	Resistor	R129,R131		2.547039	2	154078778.388085
105A702229	Resistor	R1439,R1440 ,R215, R216,R3,R4, R478, R482,R5,R6, R79,R80		2.547039	12	29507083.749401
105A702239	Resistor	R194,R195		2.547039	2	154078778.388085
105A702263	Resistor	R1290,R1315		2.547039	2	154078778.388085
105A702433	Resistor	R1349,R1356		2.547039	2	154078778.388085

File Name: BOXER-6616.rfp
Assembly: 9697APL204-D
Ref Des:
Description:

Failure Rate: 7963.571443
MTBF (hrs): 125,572
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
105A703309	Resistor	R172,R173,R365, R402,R414,R487, R488,R489,R490, R492,R498,R499, R641,R645		2.547039	14	25477245.255648
105A703329	Resistor	R276,R277,R278, R318,R319,R320, R411,R412		2.547039	8	43225424.698300
105A704729	Resistor	R1433,R1434,R258, R26,R27,R300,R333, R339,R381,R384, R385,R42,R68,R698, R699,R700,R701, R702,R703,R704, R705		2.547039	21	17274945.076062
105A705139	Resistor	R1051,R1418,R1420, R1421,R1422,R1423, R620,R623,R624, R625,R626,R627, R628,R629		2.547039	14	25477245.255648
105A706809	Resistor	R714		2.547039	1	282340674.079668
105A706829	Resistor	R187,R188		2.547039	2	154078778.388085
105A708209	Resistor	R1260		2.547039	1	282340674.079668
105A710009	Resistor	R636		2.547039	1	282340674.079668

File Name: BOXER-6616.rfp
Assembly: 9697APL204-D
Ref Des:
Description:

Failure Rate: 7963.571443
MTBF (hrs): 125,572
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
105A710039	Resistor	R1251,R1252 ,R1345, R135,R1352, R1359, R139,R175,R 198, R210,R211,R 222, R391,R449,R 450, R451,R452,R 453, R454,R455,R 456, R457,R458,R 459, R460,R461,R 462, R463,R464 R580,R581		2.547039	29	12652760.276502
105A715003	Resistor	R1302		2.547039	2	154078778.388085
105A716533	Resistor	R279,R284,R 321, R327,R621,R 622		2.547039	1	282340674.079668
105A733009	Resistor	R1407,R1408 ,R1409, R1410,R1411 ,R1412, R1413,R1414 ,R189, R190,R368,R 374, R613		2.547039	6	56573956.677649
105A747009	Resistor	RT1,RT3		2.547039	13	27342571.921361
106B510034	Resistor	RT2,RT4		2.547039	2	154078778.388085
106B704723	Resistor			2.547039	2	154078778.388085

File Name: BOXER-6616.rfp
Assembly: 9697APL204-D
Ref Des:
Description:

Failure Rate: 7963.571443
MTBF (hrs): 125,572
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,C110 ,C111, C113,C114,C 116, C117,C126,C 127, C128,C129,C 130, C131,C132,C 133, C140,C141,C 142, C143,C144,C 146,C15, C156,C157,C 159, C166,C167,C 171, C175,C180,C 181, C185,C186,C 187, C188,C189,C 190, C191,C192,C 2,C20, C203,C205,C 207, C208,C209,C 210, C211,C2		1.128806	191	4555797.914634
1124410191	Capacitor	C420,C421,C 437, C440		1.128806	4	196873384.410843
1124418090	Capacitor	C12,C14,C19 ,C21		1.128806	4	196873384.410843
1124420090	Capacitor	C151,C152		1.128806	2	375289731.076049
1124427091	Capacitor	C261,C262,C 280, C281		1.128806	4	196873384.410843
1124433090	Capacitor	C874		1.128806	1	704977644.692287
1124468090	Capacitor	C826,C856		1.128806	2	375289731.076049
1124533280	Capacitor	C838,C851,C 920, C923		1.128806	4	196873384.410843
1124539180	Capacitor	C855		1.128806	1	704977644.692287
1124547190	Capacitor	C825		1.128806	1	704977644.692287
1129522790	Capacitor	C972		1.128806	1	704977644.692287
1129701791	Capacitor	C206,C301,C 302, C303,C305,C 357, C881,C892,C 941		1.128806	9	90863428.080946

File Name: BOXER-6616.rfp
Assembly: 9697APL204-D
Ref Des:
Description:

Failure Rate: 7963.571443
MTBF (hrs): 125,572
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1129710091	Capacitor	C11,C13,C16 1,C169, C173,C433		1.128806	6	133979725.056342
1129710391	Capacitor	C201,C339,C 340, C344,C345,C 349		1.128806	6	133979725.056342
118162719B	Capacitor	TC8,TC9		4.744484	2	86049450.747498
1183668091	Capacitor	C240		4.744484	1	159663026.715137
1189615154	Capacitor	TC10,TC11,T C12,TC2, TC4,TC5,TC6 ,TC7		4.744484	8	23741959.646199
1189633151	Capacitor	TC1		4.744484	1	159663026.715137
118A6221B0	Capacitor	C915,C918,C 951		4.744484	3	59399119.141203
118C6331B1	Capacitor	C834,C835,C 836, C847,C870		4.744484	5	36944177.000623
11C1501030	Capacitor	C940		1.128806	1	704977644.692287
11C1539840	Capacitor	C260,C279		1.128806	2	375289731.076049
11C1647780	Capacitor	C823,C857		1.128806	2	375289731.076049
11C2410730	Capacitor	C368		1.128806	1	704977644.692287
11C2510480	Capacitor	C934		1.128806	1	704977644.692287
11C4501380	Capacitor	C939		1.128806	1	704977644.692287
11C4501640	Capacitor	C909		1.128806	1	704977644.692287
11C4501650	Capacitor	C830,C833,C 844, C846,C904,C 908, C911,C912		1.128806	8	101746760.035398
11C4510240	Capacitor	C921,C922		1.128806	2	375289731.076049
11C4522290	Capacitor	C371,C377		1.128806	2	375289731.076049
11C4533380	Capacitor	C873		1.128806	1	704977644.692287
11C4547190	Capacitor	C267,C268,C 269, C285,C287,C 288, C545,C546,C 547, C549,C550,C 551, C552,C553,C 597, C598,C599,C 601, C602,C604,C 606		1.128806	21	40003791.624280
11C4547730	Capacitor	C837,C854		1.128806	2	375289731.076049
11C4556690	Capacitor	C884,C894		1.128806	2	375289731.076049

File Name: BOXER-6616.rfp
Assembly: 9697APL204-D
Ref Des:
Description:

Failure Rate: 7963.571443
MTBF (hrs): 125,572
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
11C5501650	Capacitor	C965,C966		1.128806	2	375289731.076049
11C9582390	Capacitor	C936		1.128806	1	704977644.692287
11E1501080	Capacitor	C861,C862		1.128806	2	375289731.076049
11E1510010	Capacitor	C914,C917		1.128806	2	375289731.076049
11E1510050	Capacitor	C864,C865,C867,C868,C872		1.128806	5	159367490.199266
11E1522021	Capacitor	C929,C930		1.128806	2	375289731.076049
11E1522680	Capacitor	C112,C115,C819,C845		1.128806	4	196873384.410843
11E1547650	Capacitor	C926		1.128806	1	704977644.692287
11E2501080	Capacitor	C925		1.128806	1	704977644.692287
11E2501690	Capacitor	C216		1.128806	1	704977644.692287
11E2510010	Capacitor	C215,C410,C411,C933,C935		1.128806	5	159367490.199266
11E2610032	Capacitor	C304,C313		1.128806	2	375289731.076049
11E4433090	Capacitor	C895		1.128806	1	704977644.692287
11E4501030	Capacitor	C821,C850		1.128806	2	375289731.076049
11E4510021	Capacitor	C827,C828,C829,C842,C843,C902,C903,C905,C906,C907		1.128806	10	82101057.548118
11E4510440	Capacitor	C230		1.128806	1	704977644.692287
11E9547790	Capacitor	C222		1.128806	1	704977644.692287
11E9610080	Capacitor	C106,C118,C119,C120,C121,C122,C123,C124,C125,C134,C135,C164,C165,C170,C174,C182,C204,C217,C221,C257,C259,C276,C278,C430		1.128806	24	35120617.936543
11E9622052	Capacitor	C202,C299,C350,C591,C593,C876,C886		1.128806	7	115633865.771428

File Name: BOXER-6616.rfp
Assembly: 9697APL204-D
Ref Des:
Description:

Failure Rate: 7963.571443
MTBF (hrs): 125,572
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
11E9622080	Capacitor	C109,C22,C23,C24,C25,C47,C48,C49,C50,C51,C52,C57,C58,C59,C60,C61,C62,C70,C76,C80,C81,C82,C83,C84,C85,C86,C878,C879,C888,C889,C91,C92,C93,C97		1.128806	34	24984844.161172
11EA610030	Capacitor	C896,C899,C970		1.128806	3	257514172.353070
11EA647010	Capacitor	C63,C64,C65		1.128806	3	257514172.353070
11EB501040	Capacitor	C102,C103,C104,C105,C107,C108,C136,C137,C138,C139,C150,C16,C17,C18,C213,C214,C227,C26,C266,C27,C28,C286,C29,C30,C300,C31,C32,C325,C33,C335,C34,C387,C389,C39,C399,C40,C401,C41,C415,C416,C419,C42,C43,C44,C45,C46,C53,C54,C55,C56,C66,C67,C68,C69		1.128806	78	11045058.187306
11EB547740	Capacitor	C971		1.128806	1	704977644.692287

File Name: BOXER-6616.rfp
Assembly: 9697APL204-D
Ref Des:
Description:

Failure Rate: 7963.571443
MTBF (hrs): 125,572
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
11EB610050	Capacitor	C154,C155,C158, C251,C270,C290, C323,C333,C336, C337,C412,C413, C414,C417,C418, C422,C432,C816, C943,C946,C948		1.128806	21	40003791.624280
11EB622030	Capacitor	C969		1.128806	1	704977644.692287
121110156P	Inductor	L6		4.944252	1	154760964.143460
121110156T	Inductor	L7,L8		4.944252	2	83201062.149749
1211104271	Inductor	L4		4.944252	1	154760964.143460
1211106879	Inductor	L5		4.944252	1	154760964.143460
1211122076	Inductor	L9		4.944252	1	154760964.143460
1211133075	Inductor	L10		4.944252	1	154760964.143460
1211133076	Inductor	L11		4.944252	1	154760964.143460
1212306030	Inductor	FB15,FB19,F B21, FB23,FB7,FB8,FB9		4.944252	7	25970990.056682
121230603S	Inductor	FB39,FB40,F B41		4.944252	3	57363284.375370
1212308054	Inductor	FB12,FB14,F B28, FB36,FB37,F B38		4.944252	6	30055900.223009
12123A000B	Inductor	FB29,FB30,F B31, FB32,FB33,F B34, FB35		4.944252	7	25970990.056682
12123C0031	Inductor	FB1,FB2,FB4, FB5, FB6		4.944252	5	35631881.582999
12123D0001	Inductor	FB16,FB17,F B20, FB22,FB25,F B27		4.944252	6	30055900.223009
1214109000	Inductor	CH13,CH14,C H19, CH20,CH7,C H9		4.944252	6	30055900.223009

File Name: BOXER-6616.rfp
 Assembly: 9697APL204-D
 Ref Des:
 Description:

Failure Rate: 7963.571443
 MTBF (hrs): 125,572
 Temperature: 30
 Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1214109004	Inductor	CH1,CH10,C H15,CH16, CH17,CH18,C H2,CH3, CH4,CH5,CH 6,CH8		4.944252	12	15520616.516984
12310027A3	Miscellaneous	Y3		19.200000	1	23844262.770939
12310192A0	Miscellaneous	Y1		19.200000	1	23844262.770939
123132505D	Miscellaneous	Y4,Y5		19.200000	2	8854051.752197
1231332726	Miscellaneous	Y2		19.200000	1	23844262.770939
12330024A1	Miscellaneous	Y6		19.200000	1	23844262.770939
1301005444	Semiconductor	D1,D2		7.793411	2	50578095.223398
1301013040	Semiconductor	D27,D4		7.793411	2	50578095.223398
1301075140	Semiconductor	D30,D31		7.793411	2	50578095.223398
1301400642	Semiconductor	D24		7.793411	1	92807310.010983
1301793040	Semiconductor	D25,D26		7.793411	2	50578095.223398
1304001121	Optical Device	LED4		79.003355	1	6497172.749112
1304300140	Optical Device	LED1		79.003355	1	6497172.749112
1305080040	Semiconductor	D10,D11,D12 ,D15, D16,D19,D20 ,D8,D9		7.793411	9	12694047.317505
13050J58A0	Semiconductor	D29		7.793411	1	92807310.010983
1305100541	Semiconductor	D17,D18,D21 ,D22, D23,D32,D33 ,D34		7.793411	8	14161142.003130
1310390413	Semiconductor	Q64,Q65		22.463360	2	17315095.066101
1311390612	Semiconductor	Q26,Q27		22.463360	2	17315095.066101
13150027N0	Semiconductor	Q70,Q71,Q7 2,Q78, Q79		22.463360	5	7551839.591592
1315015530	Semiconductor	Q22,Q23,Q2 4		22.463360	3	12043329.789539
1315034430	Semiconductor	Q11		22.463360	1	31642600.748419
1315083270	Semiconductor	Q73,Q74,Q7 7,Q80		22.463360	4	9270607.712006
1315443512	Semiconductor	Q81		22.463360	1	31642600.748419
1315700216	Semiconductor	Q1,Q12,Q18, Q19,Q2, Q25,Q51,Q5 2,Q53,Q7, Q8,Q85,Q86, Q87,Q9		22.463360	15	2694825.052176
1315762010	Semiconductor	Q75		22.463360	1	31642600.748419

File Name: BOXER-6616.rfp
Assembly: 9697APL204-D
Ref Des:
Description:

Failure Rate: 7963.571443
MTBF (hrs): 125,572
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1315EM6K10	Semiconductor	Q15,Q16,Q17,Q20,Q21,Q3,Q4,Q54,Q55,Q56,Q57,Q59,Q6,Q69,Q88,Q89,Q91,Q92,Q93,Q94,Q95,Q96, Q98		22.463360	23	1789160.944012
1315S4C500	Semiconductor	Q83		22.463360	1	31642600.748419
1430012821	Integrated Circuit	U89		43.803003	1	11739202.588727
1430021850	Integrated Circuit	U91		43.803003	1	11739202.588727
1430036010	Integrated Circuit	U83,U85		43.803003	2	6834791.244197
1430053250	Integrated Circuit	U105		43.803003	1	11739202.588727
1430080650	Integrated Circuit	U87,U88		43.803003	2	6834791.244197
1430097420	Integrated Circuit	U56,U58,U81,U92,U93,U94		43.803003	6	2750969.191556
1430455200	Integrated Circuit	U31,U32,U33		43.803003	3	4923240.069161
14308239B0	Integrated Circuit	U90		43.803003	1	11739202.588727
143117ADJ0	Integrated Circuit	U24		43.803003	1	11739202.588727
143ALC8920	Integrated Circuit	U100		43.803003	1	11739202.588727
1440038080	Integrated Circuit	U104		43.803003	1	11739202.588727
1440211AT0	Integrated Circuit	U16,U20		43.803003	2	6834791.244197
14407517A1	Integrated Circuit	U6		43.803003	1	11739202.588727
1440819661	Integrated Circuit	U59		43.803003	1	11739202.588727
1440N42000	Integrated Circuit	U1		21.706765	1	23689035.791249
1462251281	Integrated Circuit	U38		11.063278	1	58231413.220643
149F759140	Integrated Circuit	U106,U107		43.803003	2	6834791.244197
149TS01040	Integrated Circuit	U2		43.803003	1	11739202.588727
14S3104500	Integrated Circuit	U17,U19,U21,U23,U28,U29,U30,U34,U79,U80,U82,U95,U96,U97		43.803003	14	1306102.438990
14S3524700	Integrated Circuit	U11		43.803003	1	11739202.588727
14S3820700	Integrated Circuit	U86		43.803003	1	11739202.588727
14S4021301	Integrated Circuit	U44,U45,U98,U99		43.803003	4	3879156.910661
14S4600004	Integrated Circuit	U35		43.803003	1	11739202.588727
14S4814380	Integrated Circuit	U46,U47		43.803003	2	6834791.244197
14S5974741	Integrated Circuit	U103		26.018600	1	25551442.237972
14S5A00821	Integrated Circuit	U12,U3,U57		26.018600	3	9949526.289768
14S9346001	Integrated Circuit	U10		43.803003	1	11739202.588727
1540722281	Resistor	RP2		9.971436	1	51606907.671214
1601123600	Connection	SW2		16.184835	1	35685591.360212

File Name: BOXER-6616.rfp
Assembly: 9697APL204-D
Ref Des:
Description:

Failure Rate: 7963.571443
MTBF (hrs): 125,572
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1601PB6130	Connection	SW1		16.184835	1	35685591.360212
1603129001	Connection	SW3		16.184835	1	35685591.360212
16515A2990	Connection	DIMM1		16.184835	1	35685591.360212
1652003101	Connection	CN2		16.184835	1	35685591.360212
1652532207	Connection	CN40,CN41		16.184835	2	20390152.380746
1652709202	Connection	CN18		16.184835	1	35685591.360212
165300310G	Connection	JP1,JP4,JP5		16.184835	3	14515880.849373
165300320K	Connection	JP2,JP7,JP8		16.184835	3	14515880.849373
165300520X	Connection	JP11		16.184835	1	35685591.360212
165320520V	Connection	CN43		16.184835	1	35685591.360212
1653300107	Connection	JP1(1-2),JP2(3-5), JP2(4-6),JP7(3-4), JP8(3-4)		16.184835	5	9343344.843761
165330010E	Connection	JP4(1-2),JP5(1-2)		16.184835	2	20390152.380746
1654030006	Connection	CN6		16.184835	1	35685591.360212
1654226303	Connection	CN16,CN37		16.184835	2	20390152.380746
1654418103	Connection	COM1,COM2,COM3		16.184835	3	14515880.849373
1654434300	Connection	CN53		16.184835	1	35685591.360212
1654900232	Connection	CN44		16.184835	1	35685591.360212
1654900800	Connection	CN13		16.184835	1	35685591.360212
165490700G	Connection	CN14		16.184835	1	35685591.360212
1655004011	Connection	CN15		16.184835	1	35685591.360212
1655305025	Connection	CN5		16.184835	1	35685591.360212
1655807030	Connection	CN23		16.184835	1	35685591.360212
1655902034	Connection	CN1		16.184835	1	35685591.360212
1655905038	Connection	CN20,CN21		16.184835	2	20390152.380746
1655909035	Connection	CN22		16.184835	1	35685591.360212
1655912032	Connection	CN24		16.184835	1	35685591.360212
175011301C	Miscellaneous	M1		306.000000	1	1681683.006787
1752000501	Miscellaneous	FS6,FS7		2.400000	2	143944727.196625
1752001603	Miscellaneous	FS1,FS8		2.400000	2	143944727.196625
1752001900	Miscellaneous	FS10,FS4		2.400000	2	143944727.196625
1752002500	Miscellaneous	FS2		2.400000	1	254626042.602335
175910000B	Connection	BZ1		16.184835	1	35685591.360212