

TF-ACP-5215HTT-A1-1010

Reliability Prediction Report (MTBF)

Summary	Failure Rate: 12766.605593 ppm MTBF: 73,329 Hours
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Issue date	Approval	Test Engineer
2013/07/12	Tom Lin	Jack Huang

Reliability Prediction (MTBF)

I . Model Name: ACP-5215HTT-A1

II . Prediction Date: July. 12, 2013

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:

TF-ACP-5215HTT-A1-1010 (9697QM5735-D,9697T18904-D,9697T18008-S,9697T19401-D):

- Failure Rate: 12766.605593 ppm

- MTBF: 78,329 Hours

**AAEON Reliability Prediction
Summary**

File Name: TF-ACP-5215HTT-A1-1010.rfp
Duty Cycle: 100
Calculation Model: Telcordia Issue 2
Method: Method I Case 3

Failure Rate: 12766.605593
MTBF (hrs): 78,329
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Assembly Name	Part Number	Ref Des	Quantity	Failure Rate	MTBF
TF-ACP-5185HTT-A1-1010	System		1	12766.605593	78,329
PER-189 A1.0	9697T18904-D		1	1979.044587	505,294
PER-180 B1.0	9697T18008-S		1	210.363582	4,753,675
PER-194 A0.2	9697T19401-D		1	9.259848	107,993,135
EPIC-QM57 A1.0	9697QM5735-D		1	10799.496090	92,597

**Reliability Prediction
Summary**

File Name: TF-ACP-5215HTT-A1-1010.rfp
Assembly: System
Ref Des:
Description: Top-level assembly

Failure Rate: 12766.605593
MTBF (hrs): 78,329
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
14D4266009	Integrated Circuit			15.499673	1	42351263.907438
1602065200	Switching Device			20.157476	1	26345007.229720
14D6C02G20	Integrated Circuit			10.675935	1	45040192.416407

File Name: TF-ACP-5215HTT-A1-1010.rfp
Assembly: 9697T18904-D
Ref Des:
Description:

Failure Rate: 1979.044587
MTBF (hrs): 505,294
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1654030003	Connection	CN2		11.035114	1	55608116.367615
1129610051	Capacitor	C1,C10,C14, C17,C20, C31,C34,C36 ,C57,C7		4.744484	10	19193879.126421
1122701680	Capacitor	C11,C12,C15 ,C16, C18,C19,C2, C22,C26, C27,C28,C30 ,C32, C33,C35,C4, C43,C44, C49,C5,C51, C52,C53, C55,C56,C58 ,C6,C8, C9		4.744484	29	6872030.922713
1121701080	Capacitor	C13,C23,C25 ,C29, C38		4.744484	5	36944177.000623
1129722680	Capacitor	C24		4.744484	1	159663026.715137
1124420080	Capacitor	C39,C40		4.744484	2	86049450.747498
11B4747660	Capacitor	C42		4.744484	1	159663026.715137
1124522880	Capacitor	C47		4.744484	1	159663026.715137
11C4501380	Capacitor	C48		4.744484	1	159663026.715137
11E1522680	Capacitor	C50		4.744484	1	159663026.715137
1301005442	Semiconductor	D2,D3		7.793411	2	50578095.223398
1301010340	Semiconductor	D4		7.793411	1	92807310.010983
1302005642	Semiconductor	D5		16.980258	1	37981053.727211
105A700003	Resistor	FB1,FB2,FB3, FB4, FB6,R15,R16 ,R39, R49,R50		2.547039	10	35079934.879747
1752340000	Miscellaneous	F1		2.400000	1	254626042.602335
121110226M	Inductor	L1	25.1	7.671973	1	99736684.218062
1310390411	Semiconductor	Q1		22.463360	1	31642600.748419
1315700214	Semiconductor	Q2,Q3,Q5,Q6 ,Q7		21.546488	5	8079694.690994
1310X61910	Semiconductor	Q4		22.463360	1	31642600.748419
105A747003	Resistor	R1		2.547039	1	282340674.079668
105A704733	Resistor	R4,R55		2.547039	2	154078778.388085
105A703303	Resistor	R8		2.547039	1	282340674.079668
105A704723	Resistor	R10,R11,R12 ,R13, R14,R19,R2, R20,R58, R60,R61,R9		2.547039	12	29507083.749401
105A710003	Resistor	R18		2.547039	1	282340674.079668

File Name: TF-ACP-5215HTT-A1-1010.rfp
Assembly: 9697T18904-D
Ref Des:
Description:

Failure Rate: 1979.044587
MTBF (hrs): 505,294
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
105A501033	Resistor	R21,R23,R26 ,R27, R30,R32,R41 ,R52, R56,R69,R71		2.547039	11	32049696.385471
105A733003	Resistor	R22,R28,R29		2.547039	3	107020754.986850
105A705623	Resistor	R24		2.547039	1	282340674.079668
105A722003	Resistor	R25,R34,R38		2.547039	3	107020754.986850
105A500133	Resistor	R3,R31,R40, R44,R45, R5,R6,R7		2.547039	8	43225424.698300
105A710033	Resistor	R42,R43,R51		2.547039	3	107020754.986850
105A703933	Resistor	R46		2.547039	1	282340674.079668
105A708223	Resistor	R48		2.547039	1	282340674.079668
105A703033	Resistor	R53,R54		2.547039	2	154078778.388085
105A568003	Resistor	R57		2.547039	1	282340674.079668
105A751033	Resistor	R59		2.547039	1	282340674.079668
1059501261	Resistor	R67,R68		2.547039	2	154078778.388085
105A705123	Resistor	R70		2.547039	1	282340674.079668
105A702223	Resistor	R64,R75		2.547039	2	154078778.388085
105A519113	Resistor	R72		2.547039	1	282340674.079668
14S5207402	Integrated Circuit	U4		26.018600	1	25551442.237972
14S3522800	Integrated Circuit	U5,U6		43.803003	2	6834791.244197
1759334500	Semiconductor	U7		50.427951	1	13465119.488925
14S1206800	Integrated Circuit	U8		43.803003	1	11739202.588727
14S4850002	Integrated Circuit	U9		15.499673	1	42351263.907438
14S634022E	Integrated Circuit	U10		16.900551	1	30425773.002708
14S3269500	Integrated Circuit	U11	34.1	383.206332	1	1341868.040386
1314880511	Integrated Circuit	U12		43.803003	1	11739202.588727
1314880512	Integrated Circuit	U13		43.803003	1	11739202.588727
1314881910	Integrated Circuit	U14		43.803003	1	11739202.588727
14S6200100	Integrated Circuit	U3		16.900551	1	30425773.002708
1655910123	Connection	CN5		3.678371	1	166824349.102846
1653006101	Connection	CN1		2.207023	1	278040581.838076
1655305020	Connection	CN4		1.839186	1	333648698.205692
1655302020	Connection	CN12,CN8		0.735674	2	471158206.888755
1652505203	Connection	CN11		2.390941	1	219477727.526487
1655909031	Connection	CN13		3.310534	1	185360387.892051
1655905032	Connection	CN19,CN20,C N21, CN22,CN23		1.839186	5	85152316.974523
1655904030	Connection	CN16		1.471349	1	417060872.757114
1655002020	Connection	CN18		0.735674	1	834121745.514229
1112610211	Capacitor	C41		51.497201	1	13329473.352314
1119610299	Capacitor	C46		51.497201	1	13329473.352314
1653003201	Connection	SW1		2.207023	1	278040581.838076
1653003108	Connection	JP1,JP2		1.103511	2	314105471.259170

**Reliability Prediction
Summary**

File Name: TF-ACP-5215HTT-A1-1010.rfp
Assembly: 9697T18904-D
Ref Des:
Description:

Failure Rate: 1979.044587
MTBF (hrs): 505,294
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1111610192	Capacitor	CE1,CE2		2.685211	2	74766739.447630
1655304020	Connection	CN6		32.369669	1	17842795.680106
1231112050	Miscellaneous	X1		19.200000	1	23844262.770939

File Name: TF-ACP-5215HTT-A1-1010.rfp
Assembly: 9697T18008-S
Ref Des:
Description:

Failure Rate: 210.363582
MTBF (hrs): 4,753,675
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1655910123	Connection	CN1		4.781883	1	109738863.763243
1124420080	Capacitor	C2,C3,C4,C5		4.744484	4	45505862.704531
1124415080	Capacitor	C1		4.744484	1	159663026.715137
1122701680	Capacitor	C10,C6,C7,C8,C9		4.744484	5	36944177.000623
1129610080	Capacitor	C11,C12		4.744484	2	86049450.747498
1304600040	Optical Device	D1,D2,D3,D4		2.268161	4	95524071.520509
1304300042	Optical Device	D5		2.268161	1	336094661.805450
105A700003	Resistor	R1,R10,R13,R14,R17,R19,R21,R3,R5,R6, R9		2.547039	11	32049696.385471
105A722003	Resistor	R22,R23,R24,R25		2.547039	4	82309758.689546
105A747003	Resistor	R26		2.547039	1	282340674.079668
14S9223B00	Integrated Circuit	U1,U2,U3,U4,U5		15.499673	5	10489900.250618

**Reliability Prediction
Summary**

File Name: TF-ACP-5215HTT-A1-1010.rfp
Assembly: 9697T19401-D
Ref Des:
Description:

Failure Rate: 9.259848
MTBF (hrs): 107,993,135
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1653005201	Connection	CN1		3.678371	1	166824349.102846
1654804305	Connection	CN2,CN3		1.471349	2	235579103.444378

**Reliability Prediction
Summary**

File Name: TF-ACP-5215HTT-A1-1010.rfp
Assembly: 9697QM5735-D
Ref Des:
Description:

Failure Rate: 10799.496090
MTBF (hrs): 92,597
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1654030003	Connection	CN3		11.035114	1	55608116.367615
1653007204	Connection	CN8		5.149720	1	119160249.359176
1655906033	Connection	CN13		2.207023	1	278040581.838076
165300420L	Connection	CN15		2.942697	1	208530436.378557
1654926900	Connection	CN19A		19.127532	1	32081605.596701
165301320B	Connection	CN20		9.563766	1	64163211.193402
165392521J	Connection	CN36		18.391857	1	33364869.820569
16515A099Q	Connection	CN37		75.038778	1	8177664.171708
1174510180	Capacitor	CP1,CP2,CP3 ,CP4, CP5,CP6,CP7 ,CP8		1.128806	8	101746760.035398
11C2510480	Capacitor	C1,C345,C47 ,C6, C657,C699,C 70,C729		4.744484	8	23741959.646199
1121501690	Capacitor	C100,C101,C 102, C103,C104,C 105, C106,C107,C 108,C11, C113,C116,C 117, C122,C123,C 125,C13, C131,C138,C 139, C140,C141,C 142, C144,C145,C 149,C15, C151,C152,C 154, C156,C157,C 158, C159,C160,C 161, C162,C163,C 165, C166,C167,C 168,		4.744484	262	789339.262280

**Reliability Prediction
Summary**

File Name: TF-ACP-5215HTT-A1-1010.rfp
Assembly: 9697QM5735-D
Ref Des:
Description:

Failure Rate: 10799.496090
MTBF (hrs): 92,597
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
11E9622050	Capacitor	C110,C111,C112, C119,C120,C121, C128,C129,C130, C132,C133,C134, C135,C136,C137, C146,C147,C148, C153,C266,C36,C383, C385,C405,C406, C418,C420,C423, C435,C478,C5,C523, C546,C547,C568, C611,C642,C663, C664,C675,C71,C		4.744484	42	4789078.258225
11E9501091	Capacitor	C211,C217,C221, C222,C246,C287,C29, C290,C291,C293, C297,C299,C301, C305,C307,C328, C338,C339,C34,C340, C346,C35,C360,C365, C376,C386,C393, C394,C395,C397, C398,C399,C400, C407,C408,C436, C438,C439,C443, C446,C459,C46,C		4.744484	73	2786099.513983

File Name: TF-ACP-5215HTT-A1-1010.rfp
Assembly: 9697QM5735-D
Ref Des:
Description:

Failure Rate: 10799.496090
MTBF (hrs): 92,597
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1124533190	Capacitor	C10,C245,C247		4.744484	3	59399119.141203
11C2510190	Capacitor	C12,C212,C288,C306,C31,C371,C372		4.744484	7	26949727.707925
1129610080	Capacitor	C109,C14,C143,C150,C155,C17,C173,C177,C189,C192,C265,C268,C292,C295,C311,C333,C334,C336,C337,C357,C370,C38,C387,C396,C409,C414,C415,C416,C440,C461,C470,C479,C48,C481,C483,C484,C489,C49,C492,C493,C495,C496,C497,C498,		4.744484	92	2219203.364846
1124420090	Capacitor	C16,C27		4.744484	2	86049450.747498
11E2522090	Capacitor	C18,C286,C315,C316,C317,C318,C319,C320,C321,C322,C655,C667,C668, TC26		4.744484	14	13902256.772671
1124539180	Capacitor	C19,C23,C258		4.744484	3	59399119.141203
1129710390	Capacitor	C193,C20,C248,C26,C275,C309,C347,C445,C51,C659		4.744484	10	19193879.126421

File Name: TF-ACP-5215HTT-A1-1010.rfp
Assembly: 9697QM5735-D
Ref Des:
Description:

Failure Rate: 10799.496090
MTBF (hrs): 92,597
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1129701790	Capacitor	C114,C172,C194,C22,C223,C224,C278,C281,C312,C313,C324,C330,C343,C349,C350,C351,C364,C392,C40,C412,C433,C434,C465,C466,C471,C472,C485,C486,C490,C491,C574,C714, C715		4.744484	33	6059710.507313
11C2568880	Capacitor	C24		4.744484	1	159663026.715137
1121533480	Capacitor	C25,C94		4.744484	2	86049450.747498
1124547190	Capacitor	C28,C654,C717,C718,C721,C722,C723		4.744484	7	26949727.707925
11C1522480	Capacitor	C215,C279,C284,C285,C300,C302,C37,C666,C735		4.744484	9	21223953.983763
1124418090	Capacitor	C53,C54,C66,C67		4.744484	4	45505862.704531
1189615151	Capacitor	C57,TC25,TC29,TC33,TC34		4.744484	5	36944177.000623
11E9647680	Capacitor	C170,C174,C178,C437,C452,C482,C569,C578,C58,C613		4.744484	10	19193879.126421
11E9522680	Capacitor	C169,C214,C289,C335,C579,C63,C649,C687		4.744484	8	23741959.646199
11A4901090	Capacitor	C118,C126,C127,C164,C737,C738,C739,C740		4.744484	8	23741959.646199

**Reliability Prediction
Summary**

File Name: TF-ACP-5215HTT-A1-1010.rfp
Assembly: 9697QM5735-D
Ref Des:
Description:

Failure Rate: 10799.496090
MTBF (hrs): 92,597
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1124410190	Capacitor	C171,C276,C277, C296,C303,C304, C308,C310,C540, C541,C548,C566, C572,C582,C588, C601,C607,C616, C618,C619,C625, C637,C640,C641, C643		4.744484	25	7938242.821958
105A700009	Resistor	C225,C226,C227, C228,C644,C645, C646,C647,L15,L21, L26,L30,L40,L8,R12, R125,R126,R130, R131,R140,R153,R16, R161,R162,R164, R166,R167,R170, R171,R174,R175, R177,R189,R191, R192,R193,R194, R195,R196,R197, R198,R199,R2,R2		2.547039	220	1740376.449354
1129710090	Capacitor	C249,C251,C252, C253,C695,C697, C701		4.744484	7	26949727.707925
1124515281	Capacitor	C255		4.744484	1	159663026.715137

File Name: TF-ACP-5215HTT-A1-1010.rfp
Assembly: 9697QM5735-D
Ref Des:
Description:

Failure Rate: 10799.496090
MTBF (hrs): 92,597
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1124427090	Capacitor	C259,C260,C261, C262,C605,C617, C639,C648,C689, C692,C698,C710, C713		4.744484	13	14928509.131803
11E1510050	Capacitor	C271,C272		4.744484	2	86049450.747498
11A4422180	Capacitor	C274		4.744484	1	159663026.715137
1129722091	Capacitor	C282,C380		4.744484	2	86049450.747498
11E2647650	Capacitor	C314,C323,C344, C348		4.744484	4	45505862.704531
1124522880	Capacitor	C356		4.744484	1	159663026.715137
11E9610190	Capacitor	C389,C410		4.744484	2	86049450.747498
1189622150	Capacitor	C442,C454		4.744484	2	86049450.747498
11E1547090	Capacitor	C515,C519		4.744484	2	86049450.747498
1124433090	Capacitor	C623,C624,C670		4.744484	3	59399119.141203
1124522680	Capacitor	C678		4.744484	1	159663026.715137
11C4533180	Capacitor	C712		4.744484	1	159663026.715137
1300001440	Semiconductor	D1,D2,D8		7.793411	3	35106858.962001
1211105673	Inductor	D4,D5		11.486645	2	33797057.670757
1305100541	Semiconductor	D24,D25,D26,D27, D30,D31,D32,D33, D34,D35,D36,D37,D6		7.793411	13	8953033.829657
1301005440	Semiconductor	D17,D18,D20,D28, D38,D42,D7		22.463360	7	5525968.936223
1300414848	Semiconductor	D9		7.793411	1	92807310.010983
1301002240	Semiconductor	D11,D15,D21,D22		7.793411	4	26989084.126235
1301400642	Semiconductor	D29,D40,D41		7.793411	3	35106858.962001
1752001601	Miscellaneous	FS1,FS3		2.400000	2	143944727.196625
1752011000	Miscellaneous	FS2		2.400000	1	254626042.602335
1752000501	Miscellaneous	FS4		2.400000	1	254626042.602335
1304001340	Optical Device	LED2,LED3,LED4		2.268161	3	124747615.483115
1211101064	Inductor	L1		11.486645	1	61727091.701436
1211103671	Inductor	L10,L2,L3		4.944252	3	57363284.375370
121230603S	Inductor	L36,L39,L47,L6,L9		4.944252	5	35631881.582999
121110226E	Inductor	L11		11.486645	1	61727091.701436
1059700001	Resistor	L16,L41,L42,L48, L49		2.547039	5	67008142.102588

File Name: TF-ACP-5215HTT-A1-1010.rfp
Assembly: 9697QM5735-D
Ref Des:
Description:

Failure Rate: 10799.496090
MTBF (hrs): 92,597
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
105A700003	Resistor	L17,L18,L19, L20, L22,L23,L28, R106, R109,R119,R 315, R428,R438,R 64,R68, R69,R692,R7 0		2.547039	18	20032117.836120
121110100F	Inductor	L27,L31,L33		11.486645	3	23514040.051803
1211100160	Inductor	L29		4.944252	1	154760964.143460
1214309006	Inductor	L37,L38,L43, L44, L45,L46		4.944252	6	30055900.223009
105A501039	Resistor	PR1,R102,R1 17,R122, R134,R135,R 141, R143,R144,R 147, R148,R15,R1 54,R157, R179,R224,R 225, R229,R235,R 236, R237,R238,R 247, R263,R272,R 275, R278,R280,R 299, R306,R307,R 316, R318,R32,R3 3,R335, R338,R367,R 375, R415,R416,R 418,		2.547039	100	3783516.989856

File Name: TF-ACP-5215HTT-A1-1010.rfp
Assembly: 9697QM5735-D
Ref Des:
Description:

Failure Rate: 10799.496090
MTBF (hrs): 92,597
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1315700216	Semiconductor	Q1,Q11,Q16, Q17,Q19, Q23,Q24,Q3, Q30,Q31, Q32,Q35,Q3 9,Q40, Q41,Q47,Q4 8,Q49, Q50,Q51,Q5 4,Q56, Q58,Q59,Q6 3,Q64, Q65,Q66,Q6 7,Q76, Q77,Q78,Q7 9,Q80, Q81,Q82,Q8 5,Q88, Q89,Q90,Q9 1		21.546488	41	1076949.379829
1310390410	Semiconductor	Q2,Q20,Q21, Q33,Q34, Q36,Q37,Q4 3,Q44, Q45,Q57,Q6 9,Q71, Q73		22.463360	14	2878021.548809
1315442410	Integrated Circuit	Q28,Q4,Q53, Q72		43.803003	4	3879156.910661
1315050311	Semiconductor	Q10,Q12,Q2 7,Q5,Q9		21.546488	5	8079694.690994
1315R30310	Semiconductor	Q13,Q29,Q6, Q7,Q8		21.546488	5	8079694.690994
1315441012	Integrated Circuit	Q15,Q52,Q5 5,Q61		43.803003	4	3879156.910661
1311138610	Semiconductor	Q25,Q26		22.463360	2	17315095.066101
1315230511	Semiconductor	Q38		21.546488	1	34687835.899694
14S3524700	Integrated Circuit	Q42		43.803003	1	11739202.588727
1314108416	Integrated Circuit	Q46,Q68		43.803003	2	6834791.244197
131411171C	Integrated Circuit	Q60,Q62		43.803003	2	6834791.244197
1311390610	Semiconductor	Q74		22.463360	1	31642600.748419
1315667910	Semiconductor	Q75		50.427951	1	13465119.488925
1315668510	Semiconductor	Q83	35.5	121.987092	1	5566313.388740
1231332722	Miscellaneous	Y4		19.200000	1	23844262.770939
1315230300	Semiconductor	Q86		50.427951	1	13465119.488925
1540782282	Resistor	RP1,RP15,RP 2,RP21, RP22,RP3		4.066782	6	29805856.932590
1540700081	Resistor	RP23,RP4,RP 7		4.066782	3	53426608.388751

File Name: TF-ACP-5215HTT-A1-1010.rfp
Assembly: 9697QM5735-D
Ref Des:
Description:

Failure Rate: 10799.496090
MTBF (hrs): 92,597
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1540733085	Resistor	RP10,RP5,RP6,RP8, RP9		4.066782	5	34839025.065382
1540710084	Resistor	RP16,RP17,RP18,RP19,RP20,RP26,RP27,RP28,RP29,RP31,RP33,RP34		4.066782	12	16222402.610910
1540710280	Resistor	RP30,RP32		4.066782	2	74241109.434230
106B501032	Resistor	RT1,RT3,RT4,RT5, RT6		7.724580	5	18169856.865461
106B747030	Resistor	RT2		7.724580	1	66247589.526685
105A733009	Resistor	R158,R159,R160,R168,R169,R185,R301,R336,R337,R5,R6,R7,R831		2.547039	13	27342571.921361
105A502033	Resistor	R100,R341,R63,R822, R9		2.547039	5	67008142.102588
105A700139	Resistor	R11,R13,R18,R23,R266,R269,R271,R282,R288,R30,R321,R322,R339,R384,R39,R432,R433,R434,R446,R48,R484,R497,R50,R502,R520,R531,R56,R630,R634,R687,R712,R747,R775, R827		2.547039	34	10846303.620910
1050525524	Resistor	R19,R34		2.547039	2	154078778.388085

File Name: TF-ACP-5215HTT-A1-1010.rfp
Assembly: 9697QM5735-D
Ref Des:
Description:

Failure Rate: 10799.496090
MTBF (hrs): 92,597
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1050510034	Resistor	R123,R142,R145, R181,R20,R22,R223, R348,R360,R383, R398,R399,R406, R411,R417,R42,R461, R547,R557,R73,R736, R738,R749,R75,R760, R762,R774,R797, R821,R824,R828,R93, R98		2.547039	33	11164784.962504
105A505109	Resistor	R25,R473		2.547039	2	154078778.388085
105A593103	Resistor	R27		2.547039	1	282340674.079668
1050564924	Resistor	R35,R36		2.547039	2	154078778.388085
105A704729	Resistor	R112,R258,R286, R340,R352,R385, R391,R45,R464,R564, R604,R606,R657, R669,R709,R717, R723,R725,R734, R739,R74,R746,R754, R756,R767,R786, R787,R796,R804, R817,R818,R842		2.547039	32	11502702.879433
105A501123	Resistor	R51,R611		2.547039	2	154078778.388085
105A582563	Resistor	R52,R779		2.547039	2	154078778.388085
105A551113	Resistor	R765		2.547039	1	282340674.079668
105A701009	Resistor	R291,R334,R409, R413,R414,R441, R442,R457,R54,R671, R706,R71		2.547039	12	29507083.749401

File Name: TF-ACP-5215HTT-A1-1010.rfp
Assembly: 9697QM5735-D
Ref Des:
Description:

Failure Rate: 10799.496090
MTBF (hrs): 92,597
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
105A533033	Resistor	R61		2.547039	1	282340674.079668
105A701053	Resistor	R149,R440,R62,R798		2.547039	4	82309758.689546
105A702229	Resistor	R210,R265,R381,R395,R401,R420,R436,R449,R455,R608,R65,R661,R740,R741,R792,R793,R794,R795,R801,R808,R819,R820		2.547039	22	16518584.576317
105A512103	Resistor	R215,R72		2.547039	2	154078778.388085
105A708229	Resistor	R146,R178,R209,R619,R77		2.547039	5	67008142.102588
105A703309	Resistor	R187,R190,R219,R221,R239,R242,R243,R244,R245,R249,R250,R252,R253,R254,R273,R276,R404,R560,R605,R676,R766,R86,R87,R88		2.547039	24	15190138.820515
1050520004	Resistor	R110,R111,R113,R165,R182,R186,R220,R344,R89		2.547039	9	38754445.632391
105A515009	Resistor	R128,R136,R137,R173,R309,R310,R325,R326,R328,R696,R780,R784, R785		2.547039	13	27342571.921361

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Assembly: 9697QM5735-D
Ref Des:
Description:

Failure Rate: 10799.496090
MTBF (hrs): 92,597
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
105A510009	Resistor	R104,R105,R116, R569,R602,R615, R626,R636		2.547039	8	43225424.698300
1059704703	Resistor	R114		2.547039	1	282340674.079668
105A704334	Resistor	R133,R493		2.547039	2	154078778.388085
123132505C	Miscellaneous	Y1,Y3,Y5		19.200000	3	5742504.738137
105A508203	Resistor	R172,R176,R565		2.547039	3	107020754.986850
105A500139	Resistor	R180,R183,R207, R208,R256,R261, R300,R345,R346, R397,R555,R556, R677		2.547039	13	27342571.921361
105A506823	Resistor	R227,R251,R439		2.547039	3	107020754.986850
105A700103	Resistor	R240,R362,R377		2.547039	3	107020754.986850
105A503033	Resistor	R241		2.547039	1	282340674.079668
105A705609	Resistor	R267,R548,R716, R722,R724,R733		2.547039	6	56573956.677649
105A702209	Resistor	R270,R332,R478, R481,R545,R554, R561,R769,R772, R773		2.547039	10	35079934.879747
105A502003	Resistor	R292,R293		2.547039	2	154078778.388085
105A505103	Resistor	R294,R664		2.547039	2	154078778.388085
105A549969	Resistor	R296,R523,R568, R572,R623		2.547039	5	67008142.102588
105A513333	Resistor	R297		2.547039	1	282340674.079668
105A549913	Resistor	R298,R624,R625		2.547039	3	107020754.986850
105A702263	Resistor	R302,R303,R698		2.547039	3	107020754.986850
1050519114	Resistor	R314		2.547039	1	282340674.079668
105A704733	Resistor	R319,R469		2.547039	2	154078778.388085
105A580613	Resistor	R320		2.547039	1	282340674.079668
105A573213	Resistor	R323		2.547039	1	282340674.079668

File Name: TF-ACP-5215HTT-A1-1010.rfp
Assembly: 9697QM5735-D
Ref Des:
Description:

Failure Rate: 10799.496090
MTBF (hrs): 92,597
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
105A507509	Resistor	R324,R327,R329, R424,R425,R426, R427,R503,R515		2.547039	9	38754445.632391
105A541233	Resistor	R330		2.547039	1	282340674.079668
105A556203	Resistor	R331		2.547039	1	282340674.079668
105A540213	Resistor	R351		2.547039	1	282340674.079668
105A512423	Resistor	R356		2.547039	1	282340674.079668
105A700233	Resistor	R363,R521		2.547039	2	154078778.388085
105A549903	Resistor	R366		2.547039	1	282340674.079668
105A514733	Resistor	R374		2.547039	1	282340674.079668
105A510523	Resistor	R387,R389		2.547039	2	154078778.388085
105A706803	Resistor	R388,R666		2.547039	2	154078778.388085
105A710053	Resistor	R390,R689		5.993032	2	65196965.593184
105A547033	Resistor	R394		2.547039	1	282340674.079668
1050530034	Resistor	R396		2.547039	1	282340674.079668
105A533213	Resistor	R412,R423		2.547039	2	154078778.388085
105A522663	Resistor	R429		2.547039	1	282340674.079668
105A537463	Resistor	R508		2.547039	1	282340674.079668
105A590963	Resistor	R513		2.547039	1	282340674.079668
105A515413	Resistor	R526		2.547039	1	282340674.079668
105A705123	Resistor	R527		2.547039	1	282340674.079668
105A575003	Resistor	R528,R612		2.547039	2	154078778.388085
105A523713	Resistor	R539		2.547039	1	282340674.079668
105A532463	Resistor	R544		2.547039	1	282340674.079668
105A554963	Resistor	R551		2.547039	1	282340674.079668
105A501503	Resistor	R552,R627		2.547039	2	154078778.388085
105A522003	Resistor	R583,R587		2.547039	2	154078778.388085
105A501523	Resistor	R613		2.547039	1	282340674.079668
105A530113	Resistor	R614,R640,R641, R705		2.547039	4	82309758.689546
105A524963	Resistor	R639		2.547039	1	282340674.079668
105A513003	Resistor	R649		2.547039	1	282340674.079668
105A507533	Resistor	R683		2.547039	1	282340674.079668
105A542233	Resistor	R697		2.547039	1	282340674.079668
105A517423	Resistor	R711		2.547039	1	282340674.079668
105A509133	Resistor	R714		2.547039	1	282340674.079668
1050582514	Resistor	R718		2.547039	1	282340674.079668
1059704761	Resistor	R720		2.547039	1	282340674.079668
105A705139	Resistor	R727,R728,R729, R732,R776		2.547039	5	67008142.102588
105A747003	Resistor	R731,R757		2.547039	2	154078778.388085
105A536513	Resistor	R748		2.547039	1	282340674.079668
105A501529	Resistor	R750		2.547039	1	282340674.079668

File Name: TF-ACP-5215HTT-A1-1010.rfp
Assembly: 9697QM5735-D
Ref Des:
Description:

Failure Rate: 10799.496090
MTBF (hrs): 92,597
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
105A526113	Resistor	R761		2.547039	1	282340674.079668
105A701003	Resistor	R764		2.547039	1	282340674.079668
1059710001	Resistor	R802,R803,R810		2.547039	3	107020754.986850
105A700109	Resistor	R832,R833,R834, R835,R836,R837, R838,R839		2.547039	8	43225424.698300
1189633160	Capacitor	TC1,TC10,TC11,TC12, TC13,TC14,TC15, TC16,TC17,TC18, TC19,TC20,TC21, TC22,TC24,TC27, TC28,TC5,TC6,TC7, TC8,TC9		4.744484	22	8986075.849542
1189915180	Capacitor	TC2,TC3,TC30,TC32		4.744484	4	45505862.704531
1182633080	Capacitor	TC4		4.744484	1	159663026.715137
14S5A00821	Integrated Circuit	U1,U12,U13,U15,U39, U43,U45,U46,U6,U7		15.499673	10	5553714.402454
14S2047500	Integrated Circuit	U2,U8		43.803003	2	6834791.244197
14S4288200	Integrated Circuit	U3		15.499673	1	42351263.907438
14S5912300	Integrated Circuit	U5		15.499673	1	42351263.907438
14S9811500	Integrated Circuit	U9		43.803003	1	11739202.588727
14S4BD8200	Integrated Circuit	U11		15.499673	1	42351263.907438
14S4036800	Integrated Circuit	U14		43.803003	1	11739202.588727
14S4021301	Integrated Circuit	U16,U24,U25,U48		43.803003	4	3879156.910661
14S5A00401	Integrated Circuit	U17,U32		15.499673	2	23591504.930418
14S5812502	Integrated Circuit	U18		15.499673	1	42351263.907438
14S5A12506	Integrated Circuit	U19		15.499673	1	42351263.907438
123131435F	Miscellaneous	Y2		19.200000	1	23844262.770939
14S4048502	Integrated Circuit	U28,U49		43.803003	2	6834791.244197
14S3050500	Integrated Circuit	U30	33.5	370.261976	1	1388779.737867
14S3128421	Integrated Circuit	U31		43.803003	1	11739202.588727
14S4825740	Integrated Circuit	U33		15.499673	1	42351263.907438
14S2041800	Integrated Circuit	U34		43.803003	1	11739202.588727
14S4288100	Integrated Circuit	U35		43.803003	1	11739202.588727
1314780511	Integrated Circuit	U36		43.803003	1	11739202.588727
14S2048800	Integrated Circuit	U38		10.675935	1	45040192.416407

File Name: TF-ACP-5215HTT-A1-1010.rfp
Assembly: 9697QM5735-D
Ref Des:
Description:

Failure Rate: 10799.496090
MTBF (hrs): 92,597
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
14S3170800	Integrated Circuit	U41		43.803003	1	11739202.588727
14S4878100	Integrated Circuit	U50		43.803003	1	11739202.588727
1315970211	Semiconductor	U52,U56,U57		21.546488	3	12968193.165323
14S4257701	Integrated Circuit	U53		15.499673	1	42351263.907438
14S2200900	Integrated Circuit	U54		43.803003	1	11739202.588727
14S9341101	Integrated Circuit	U55		43.803003	1	11739202.588727
14S3E00100	Integrated Circuit	U58		43.803003	1	11739202.588727
14S3S00900	Integrated Circuit	U59		43.803003	1	11739202.588727
1654920302	Connection	CN12		0.735674	1	834121745.514229
121230603D	Inductor	L12,L13,L14		4.944252	3	57363284.375370
105A505623	Resistor	R163,R358		2.547039	2	154078778.388085
105A501133	Resistor	R53		2.547039	1	282340674.079668
105A518713	Resistor	R26		2.547039	1	282340674.079668
14S6308002	Integrated Circuit	U51		16.900551	1	30425773.002708
105A703039	Resistor	R841		2.547039	1	282340674.079668
105A701539	Resistor	R843		2.547039	1	282340674.079668
1050584514	Resistor	R402		2.547039	1	282340674.079668
1600030203	Connection	SW1(1-ON,2-OFF)		0.735674	1	834121745.514229
1651609882	Connection	U23		0.735674	1	834121745.514229
1654226303	Connection	CN19		0.735674	1	834121745.514229
1655306023	Connection	CN23		0.735674	1	834121745.514229
1654415308	Connection	CN35		7.172824	1	73159242.508829
1655902030	Connection	BAT1		0.735674	1	834121745.514229
175011901C	Miscellaneous	BAT2		150.000000	1	4766837.865699
175910000B	Miscellaneous	BUZZ1		78.000000	1	6623341.226317
1655910131	Connection	CN1		0.735674	1	834121745.514229
1655305020	Connection	CN2		0.735674	1	834121745.514229
1652602108	Connection	CN5		0.735674	1	834121745.514229
1654409103	Connection	CN11		3.310534	1	185360387.892051
165320520E	Connection	CN17		0.735674	1	834121745.514229
1653005201	Connection	CN21		0.735674	1	834121745.514229
1655909031	Connection	CN25,CN26,CN34		3.310534	3	74052849.505145
1655306020	Connection	CN27		0.735674	1	834121745.514229
1655003010	Connection	CN28		0.735674	1	834121745.514229
165251420B	Connection	CN29,CN30		6.694636	2	45503535.317693
1654808309	Connection	CN31,CN32		3.825506	2	79631186.805962
1653003101	Connection	JP2,JP7		0.735674	2	471158206.888755
1653003201	Connection	JP3,JP4,JP6		0.735674	3	333237822.773153
1654907002	Connection	SATA1,SATA2		3.347318	2	91007070.635385
1655304020	Connection	CN7		19.127532	1	27434715.940811
1653900039	Connection	CN36A		0.735674	1	834121745.514229