

NVR-CV

Reliability Prediction Report (MTBF)

Summary	Failure Rate: 8448.296895 ppm MTBF: 118,367 Hours
---------	--

Issue date	Approval	Test Engineer
2013/09/26	Tom Lin	Louie Lee

Reliability Prediction (MTBF)

I . Model Name: NVR-CV

II . Prediction Date: September. 26, 2013

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

IV . Predicted by: Louie Lee

V . Equipment: Windchill Quality Solutions 10.1

VI. Simulation Environment:

- Temperature: 30 degrees C
- Standard: Telcordia (Bellcore) Standard

VII. Term and Definition:

- Unit : An assembly of device.
- Duty Cycle : Used to specify the percentage of time that the element is in an on state, and it is equal to the percentage of total time the item is in the active environment.
- Quantity : The quantity of the selected item.
- Failure Rate : Used to specify that the failure rate is to be calculated based the selected Calculation models. The Failure rate multiplier is 1000000000.
- MTBF : MTBF is always specified in hours.

VIII. Prediction Result:

NVR-CV (NVR-CV-A10):

- Failure Rate: 8448.296895 ppm

- MTBF: 118,367 Hours

**AAEON Reliability Prediction
Summary**

File Name: NVR-CV.rfp
Duty Cycle: 100
Calculation Model: Telcordia Issue 2
Method: Method I Case 3

Failure Rate: 8448.296895
MTBF (hrs): 118,367
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Assembly Name	Part Number	Ref Des	Quantity	Failure Rate	MTBF
NVR-CV	NVR-CV-A10		1	8448.296895	118,367
Main Board EMB-CV2	9697CV2003-D		1	8259.335503	121,075
Power control board. PER-T270	9697T27001-D		1	217.543034	4,596,792

File Name: NVR-CV.rfp
Assembly: 9697CV2003-D
Ref Des:
Description:

Failure Rate: 8259.335503
MTBF (hrs): 121,075
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
09G013120103	Inductor	L11,L12,L4,L5,L6		4.944252	5	35631881.582999
09G023681019	Inductor	GLR1,GLR2,GLR3		4.944252	3	57363284.375370
1050501054	Resistor	R27,R312,R333,R366,R371		2.547039	5	67008142.102588
1050501224	Resistor	R499,R504		2.547039	2	154078778.388085
1050502204	Resistor	R107,R128,R141,R478,R62		2.547039	5	67008142.102588
1050502234	Resistor	R393		2.547039	1	282340674.079668
1050502724	Resistor	R369,R385,R413,R462,R463,R464,R465,R466,R471,R5,R502,R503,R533,R534,R698,R699,R7,R81,R82,R83		2.547039	20	18104712.511396
1050502734	Resistor	R627,R629		2.547039	2	154078778.388085
1050503324	Resistor	R551,R552		2.547039	2	154078778.388085
1050503334	Resistor	R306,R374		2.547039	2	154078778.388085
1050503634	Resistor	R253		2.547039	1	282340674.079668
1050503914	Resistor	R624		2.547039	1	282340674.079668
1050504724	Resistor	R104,R123,R125,R13,R163,R169,R172,R180,R181,R260,R276,R314,R334,R39,R409,R47,R482,R495,R497,R507,R54,R558,R562,R58,R625,R626,R649,R651,R652,R653,R654,R656,R68,R701,R702,R703,R704,R718,R719		2.547039	39	9493970.778443
1050505124	Resistor	R518,R557		2.547039	2	154078778.388085

File Name: NVR-CV.rfp
Assembly: 9697CV2003-D
Ref Des:
Description:

Failure Rate: 8259.335503
MTBF (hrs): 121,075
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1050505604	Resistor	R117,R121		2.547039	2	154078778.388085
1050505633	Resistor	R392		2.547039	1	282340674.079668
1050507564	Resistor	R300		2.547039	1	282340674.079668
1050508224	Resistor	R101,R103,R113, R114,R115,R118, R119,R120,R129, R151,R152,R175, R177,R186,R189, R194,R20,R213,R227, R231,R24,R241,R248, R251,R256,R257, R263,R266,R267, R271,R280,R284, R286,R287,R289, R293,R294,R297, R301,R315,R330,		2.547039	87	4337508.502880
1050510034	Resistor	R212,R250,R273, R296,R399,R528, R535,R536,R537, R554,R556,R563, R605,R64,R65,R66, R683,R696,R709, R710,R75		2.547039	21	17274945.076062
1050510524	Resistor	R307		2.547039	1	282340674.079668
1050511009	Resistor	R222,R255		2.547039	2	154078778.388085
1050512724	Resistor	R358		2.547039	1	282340674.079668
1050513034	Resistor	R229		2.547039	1	282340674.079668
1050515034	Resistor	R318		2.547039	1	282340674.079668
1050517414	Resistor	R159		2.547039	1	282340674.079668
1050520034	Resistor	R395,R452		2.547039	2	154078778.388085
1050521514	Resistor	R166,R167,R25,R8		2.547039	4	82309758.689546
1050523224	Resistor	R320		2.547039	1	282340674.079668

File Name: NVR-CV.rfp
Assembly: 9697CV2003-D
Ref Des:
Description:

Failure Rate: 8259.335503
MTBF (hrs): 121,075
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1050524904	Resistor	R131,R90		2.547039	2	154078778.388085
1050530004	Resistor	R511,R513,R514, R516,R517,R521		2.547039	6	56573956.677649
1050531604	Resistor	R524		2.547039	1	282340674.079668
1050532414	Resistor	R659		2.547039	1	282340674.079668
1050533004	Resistor	R10,R26,R45, ,R613, R91		2.547039	5	67008142.102588
1050549924	Resistor	R317		2.547039	1	282340674.079668
1050551004	Resistor	R313		2.547039	1	282340674.079668
1050560424	Resistor	R21		2.547039	1	282340674.079668
1050564914	Resistor	R303		2.547039	1	282340674.079668
1050590964	Resistor	R272		2.547039	1	282340674.079668
1050597604	Resistor	R304		2.547039	1	282340674.079668
1050700102	Resistor	R190,R30,R376, R473		2.547039	4	82309758.689546
1050702734	Resistor	R623		2.547039	1	282340674.079668
1050703054	Resistor	R73		2.547039	1	282340674.079668
1050720044	Resistor	R410		2.547039	1	282340674.079668
105A500139	Resistor	R1,R126,R130, R14, R145,R157,R160, R168,R178,R197, R220,R224,R23, R234, R269,R28,R281, R282, R29,R31,R32, ,R327, R351,R367,R372, R387,R389,R412, R415,R419,R43, R474, R48,R483,R484, R550, R585,R586,R646, R688,R689,R690, R691,R70,R79, R8		2.547039	49	7603103.900483
105A500239	Resistor	R122,R356,R84, R87		2.547039	4	82309758.689546
105A501003	Resistor	R259		2.547039	1	282340674.079668

File Name: NVR-CV.rfp
Assembly: 9697CV2003-D
Ref Des:
Description:

Failure Rate: 8259.335503
MTBF (hrs): 121,075
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
105A501039	Resistor	R124,R155,R238, R249,R288,R309, R319,R344,R345, R347,R348,R349, R350,R352,R354, R361,R364,R37, R370, R377,R380,R384, R398,R40,R402, R405, R406,R407,R414, R416,R422,R440, R442,R443,R496, R500,R555,R631, R632,R693,R697, R382		2.547039	46	8085699.252497
105A501053	Resistor	R403		2.547039	1	282340674.079668
105A501139	Resistor	R403		2.547039	1	282340674.079668
105A501539	Resistor	R146,R17,R316, R421, R432,R433		2.547039	6	56573956.677649
105A502039	Resistor	R156,R332,R41, R434, R530,R559		2.547039	6	56573956.677649
105A503039	Resistor	R435		2.547039	1	282340674.079668
105A503300	Resistor	AL1,AL2,AL3,AL4, AL5,AL6		2.547039	6	56573956.677649
105A505109	Resistor	R594,R595		2.547039	2	154078778.388085
105A505629	Resistor	R16,R18		2.547039	2	154078778.388085
105A506829	Resistor	R365		2.547039	1	282340674.079668
105A507523	Resistor	R142		2.547039	1	282340674.079668
105A510009	Resistor	R522		2.547039	1	282340674.079668
105A513009	Resistor	R139		2.547039	1	282340674.079668
105A515009	Resistor	R203,R204,R205, R508,R509,R510		2.547039	6	56573956.677649
105A524919	Resistor	R206,R475,R476		2.547039	3	107020754.986850
105A524963	Resistor	R262		2.547039	1	282340674.079668

File Name: NVR-CV.rfp
Assembly: 9697CV2003-D
Ref Des:
Description:

Failure Rate: 8259.335503
MTBF (hrs): 121,075
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
105A527403	Resistor	R105		2.547039	1	282340674.079668
105A549969	Resistor	R182,R183		2.547039	2	154078778.388085
105A553629	Resistor	R308		2.547039	1	282340674.079668
105A566519	Resistor	R396		2.547039	1	282340674.079668
105A700003	Resistor	R106,R108,R 109, R154,R161,R 176, R179,R209,R 217, R223,R235,R 274, R299,R328,R 363, R400,R424,R 425, R441,R444,R 460, R481,R519,R 53,R553, R572,R67,R6 82		2.547039	28	13089488.559853
105A700009	Resistor	R110,R116,R 127, R216,R245,R 252, R265,R277,R 278,R3, R311,R326,R 335, R339,R342,R 35,R362, R373,R375,R 379, R381,R383,R 388, R391,R401,R 408, R456,R459,R 486, R488,R512,R 520, R529,R538,R 539, R540,R561,R 571, R574,R575,R 583, R525,R526		2.547039	45	8260575.675294
105A701009	Resistor	R525,R526		2.547039	2	154078778.388085

File Name: NVR-CV.rfp
Assembly: 9697CV2003-D
Ref Des:
Description:

Failure Rate: 8259.335503
MTBF (hrs): 121,075
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
105A702229	Resistor	R134,R148,R150, R162,R357,R603, R604,R684,R685, R686,R687		2.547039	11	32049696.385471
105A702269	Resistor	R573		2.547039	1	282340674.079668
105A703309	Resistor	R100,R153,R158, R165,R228,R244, R295,R38,R386,R599, R600,R601,R602, R711,R712		2.547039	15	23852782.943395
105A704763	Resistor	R210,R214,R22,R322		2.547039	4	82309758.689546
105A705609	Resistor	R254		2.547039	1	282340674.079668
105A706809	Resistor	R268,R270,R607		2.547039	3	107020754.986850
105A707509	Resistor	R705,R706,R707		2.547039	3	107020754.986850
105A707529	Resistor	R598		2.547039	1	282340674.079668
105A710009	Resistor	R111,R12,R436,R437, R438,R439,R445, R446,R447,R448, R449,R450,R628, R630		2.547039	14	25477245.255648
105A710053	Resistor	R226,R258,R341		2.547039	3	107020754.986850
105A739039	Resistor	R279,R331		2.547039	2	154078778.388085
105A747009	Resistor	R490,R506		2.547039	2	154078778.388085
105A768009	Resistor	R202		2.547039	1	282340674.079668
106BA01033	Resistor	RT1,RT2,RT3		7.724580	3	27814800.254496
1111610194	Capacitor	C34,C583		4.744484	2	86049450.747498
1119647191	Capacitor	C473,EC1,EC2,EC3, EC4		4.744484	5	36944177.000623

File Name: NVR-CV.rfp
Assembly: 9697CV2003-D
Ref Des:
Description:

Failure Rate: 8259.335503
MTBF (hrs): 121,075
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1121501690	Capacitor	C230,C240,C390, C400,C401,C403, C407,C411,C417, C418,C420,C422, C427,C428,C468, C469,C524,C536, C641,C642		1.128806	20	41950408.034165
1121501691	Capacitor	C1,C100,C102,C103, C104,C105,C106, C123,C132,C139, C140,C142,C144, C145,C149,C150, C152,C153,C154, C155,C160,C161, C166,C167,C168, C169,C178,C181, C182,C183,C186, C187,C191,C192, C193,C2,C20,C204, C208,C209,C216, C540		1.128806	209	4166691.112153
1121610060	Capacitor	C540		1.128806	1	704977644.692287
1124410190	Capacitor	C613,C616,C617, C620		1.128806	4	196873384.410843
1124418090	Capacitor	C364,C365		1.128806	2	375289731.076049
1124427080	Capacitor	C416,C430		1.128806	2	375289731.076049
1124427091	Capacitor	C385,C394		1.128806	2	375289731.076049
1124501890	Capacitor	C185		1.128806	1	704977644.692287
1124510280	Capacitor	C421,C501		1.128806	2	375289731.076049
1124522290	Capacitor	C465		1.128806	1	704977644.692287
1129610051	Capacitor	C258,C530		1.128806	2	375289731.076049
1129622690	Capacitor	C538,C542,C594, C599		1.128806	4	196873384.410843

File Name: NVR-CV.rfp
Assembly: 9697CV2003-D
Ref Des:
Description:

Failure Rate: 8259.335503
MTBF (hrs): 121,075
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1129710090	Capacitor	C543,C544,C545		1.128806	3	257514172.353070
1129710391	Capacitor	C287,C32,C344,C345,C366,C406,C45,C563,C574,C614,C63,C632		1.128806	12	68856937.301178
1129722091	Capacitor	C171		1.128806	1	704977644.692287
1174515190	Capacitor	CP1,CP2,CP3,CP4		1.128806	4	196873384.410843
1181610196	Capacitor	C319,C502		4.744484	2	86049450.747498
1189610091	Capacitor	C609,C610		4.744484	2	86049450.747498
1189656196	Capacitor	C110,C111,C112,C113,C117,C15,C16,C180,C223,C453,C624		4.744484	11	17521838.469916
11A4415190	Capacitor	C419,C424,C432,C438		1.128806	4	196873384.410843
11A4430090	Capacitor	C389,C397,C505,C506,C510,C511		1.128806	6	133979725.056342
11A4482090	Capacitor	C336		1.128806	1	704977644.692287
11A4956690	Capacitor	C606,C607,C608		1.128806	3	257514172.353070
11C1547480	Capacitor	C318		1.128806	1	704977644.692287
11C2501790	Capacitor	C107,C108,C109,C114,C115,C116,C118,C119,C120,C121,C125,C126,C189,C62,C67,C68,C69,C72,C73,C74,C75,C76,C77,C79,C80,C81		1.128806	26	32480878.530766
11C2510480	Capacitor	C26,C549,C615		1.128806	3	257514172.353070
11C2522780	Capacitor	C454		1.128806	1	704977644.692287
11C4522191	Capacitor	C337		1.128806	1	704977644.692287
11C4522290	Capacitor	C21		1.128806	1	704977644.692287

File Name: NVR-CV.rfp
Assembly: 9697CV2003-D
Ref Des:
Description:

Failure Rate: 8259.335503
MTBF (hrs): 121,075
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
11E1510050	Capacitor	C128,C129,C130, C133,C157,C17,C173, C175,C184,C197, C202,C210,C243,C25, C255,C256,C275, C291,C305,C31,C316, C329,C331,C335, C352,C393,C409,C41, C410,C42,C425,C436, C455,C456,C466, C467,C476,C579,C58, C580,C585,C597, C598,C625,C643,		1.128806	46	18574133.926778
11E1522680	Capacitor	C127,C134,C339, C375,C87,C96		1.128806	6	133979725.056342
11E1547650	Capacitor	C404		1.128806	1	704977644.692287
11E2501080	Capacitor	C101,C12,C143,C156, C164,C30,C317,C405, C414,C43,C457,C53, C578,C600,C601		1.128806	15	55479656.844874
11E2510060	Capacitor	C531,C532,C587		1.128806	3	257514172.353070

File Name: NVR-CV.rfp
Assembly: 9697CV2003-D
Ref Des:
Description:

Failure Rate: 8259.335503
MTBF (hrs): 121,075
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
11E9501080	Capacitor	C135,C136,C137, C158,C165,C174, C179,C188,C190, C194,C200,C201, C205,C206,C214, C217,C231,C232, C236,C24,C249,C252, C254,C261,C268, C277,C278,C286, C314,C322,C361, C368,C369,C378, C444,C447,C485, C486,C64,C92		1.128806	40	21305452.824644
11E9501090	Capacitor	C295,C539,C541, C629		1.128806	4	196873384.410843
11E9622050	Capacitor	C212,C213,C241, C242,C37,C386,C395, C70,C83,C86,C95		1.128806	11	74892583.279796
1211100114	Inductor	L13		4.944252	1	154760964.143460
1211101268	Inductor	L1		4.944252	1	154760964.143460
121110476Z	Inductor	L8,L9		4.944252	2	83201062.149749
1211122071	Inductor	L3		4.944252	1	154760964.143460
121113307C	Inductor	L10		4.944252	1	154760964.143460
1211147075	Inductor	L7	20.7	7.138350	1	107192433.792143
1212306030	Inductor	FB11,FB12		4.944252	2	83201062.149749
121230805X	Inductor	FB5,FB7,FB8		4.944252	3	57363284.375370
121231206H	Inductor	FB1,FB2,FB3,FB4		4.944252	4	43912872.424775
12123B000M	Inductor	L2		4.944252	1	154760964.143460
12123C0010	Inductor	FB10,FB9		4.944252	2	83201062.149749

File Name: NVR-CV.rfp
Assembly: 9697CV2003-D
Ref Des:
Description:

Failure Rate: 8259.335503
MTBF (hrs): 121,075
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1214309008	Inductor	CH1,CH10,C H11,CH12, CH2,CH3,CH 4,CH5, CH6,CH7,CH 8,CH9		4.944252	12	15520616.516984
12310025A0	Miscellaneous	X2,X3,X4		19.200000	3	5742504.738137
1231327053	Miscellaneous	X1,Y2		19.200000	2	8854051.752197
1231332726	Miscellaneous	Y1		19.200000	1	23844262.770939
1300414848	Semiconductor	D1		7.793411	1	92807310.010983
1301001443	Semiconductor	D26		7.793411	1	92807310.010983
13010014L0	Semiconductor	GD1		7.793411	1	92807310.010983
1301005440	Semiconductor	D10,D31,D35 ,D5		7.793411	4	26989084.126235
1301005442	Semiconductor	D8		7.793411	1	92807310.010983
1301005444	Semiconductor	D36,D37,D38 ,D39, D40		7.793411	5	21965031.404253
1301053040	Semiconductor	D33,D34		7.793411	2	50578095.223398
1301400642	Semiconductor	D19,D4		7.793411	2	50578095.223398
1304100005	Optical Device	LED1		79.003355	1	6497172.749112
1305099140	Semiconductor	D13,D14		7.793411	2	50578095.223398
1309009940	Semiconductor	D2,D22,D23, D24,D27, D28,D29,D3, D30		7.793411	9	12694047.317505
1310222210	Semiconductor	Q45,Q58		22.463360	2	17315095.066101
1310390410	Semiconductor	Q11,Q18,Q1 9,Q2,Q20, Q22,Q23,Q3 2,Q4,Q54, Q62,Q66,Q7, Q82,Q87, Q96		22.463360	16	2533798.883137
1310390413	Semiconductor	Q103,Q60,Q 65,Q99		22.463360	4	9270607.712006
1311390612	Semiconductor	Q59,Q81,Q8 5		22.463360	3	12043329.789539
1314010410	Semiconductor	U18	22.5	40.210517	1	17676945.734273
1314010910	Semiconductor	U1	11.4	30.487107	1	23314745.302340
1315013810	Semiconductor	Q48,Q53,Q9 5,Q97, Q98		22.463360	5	7551839.591592
1315081180	Semiconductor	Q84		22.463360	1	31642600.748419
1315090311	Semiconductor	Q17	15.9	34.187249	1	20791351.759004
1315090311	Semiconductor	Q26		22.463360	1	31642600.748419
1315094520	Semiconductor	Q34		22.463360	1	31642600.748419

File Name: NVR-CV.rfp
Assembly: 9697CV2003-D
Ref Des:
Description:

Failure Rate: 8259.335503
MTBF (hrs): 121,075
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1315200312	Semiconductor	Q27,Q50,Q52,Q64,Q67,Q69,Q71		22.463360	7	5525968.936223
1315230511	Semiconductor	Q83		22.463360	1	31642600.748419
1315503010	Semiconductor	Q76		22.463360	1	31642600.748419
1315503010	Semiconductor	Q8	13.9	32.503370	1	21868475.080282
1315700211	Semiconductor	Q24,Q25,Q88,Q89,Q94		22.463360	5	7551839.591592
1315700217	Semiconductor	Q1,Q100,Q101,Q102,Q21,Q28,Q29,Q3,Q33,Q37,Q38,Q40,Q41,Q42,Q43,Q44,Q45,Q56,Q57,Q63,Q68,Q70,Q73,Q75,Q78,Q79,Q80,Q9,Q91,Q92		22.463360	30	1384716.259115
1315703011	Semiconductor	Q35,Q77		22.463360	2	17315095.066101
1315703011	Semiconductor	Q6	12.8	31.604235	1	22490629.268428
1430017080	Integrated Circuit	U30	12.2	100.441514	1	5119519.879336
1430082020	Integrated Circuit	U2		43.803003	1	11739202.588727
1430082050	Integrated Circuit	U23		43.803003	1	11739202.588727
143117ADJ0	Integrated Circuit	U28	10.9	92.223700	1	5575706.995224
1440828010	Integrated Circuit	U12	15.2	121.984596	1	4215387.403076
1440D25500	Integrated Circuit	U11	36.3	91.037054	1	5648384.960862
14E900CV20	Integrated Circuit	U20		11.063278	1	58231413.220643
14S1035803	Integrated Circuit	U10,U6		43.803003	2	6834791.244197
14S3009900	Integrated Circuit	U31,U32,U33,U34,U35,U36		43.803003	6	2750969.191556
14S3104500	Integrated Circuit	U41,U42		43.803003	2	6834791.244197
14S3433900	Integrated Circuit	U17		43.803003	1	11739202.588727
14S3524701	Integrated Circuit	U29		43.803003	1	11739202.588727
14S3816800	Integrated Circuit	U15		43.803003	1	11739202.588727
14S4021301	Integrated Circuit	U39,U40		43.803003	2	6834791.244197
14S4048501	Integrated Circuit	U37,U44		43.803003	2	6834791.244197
14S4362707	Integrated Circuit	U24	13.5	109.314917	1	4703953.872580
14S4811103	Integrated Circuit	U25,U26		43.803003	2	6834791.244197
14S5812502	Integrated Circuit	U43		26.018600	1	25551442.237972
14S5974741	Integrated Circuit	U53		26.018600	1	25551442.237972
14S5A00704	Integrated Circuit	U19		26.018600	1	25551442.237972
14S5A00821	Integrated Circuit	U21,U51,U54		26.018600	3	9949526.289768

File Name: NVR-CV.rfp
Assembly: 9697CV2003-D
Ref Des:
Description:

Failure Rate: 8259.335503
MTBF (hrs): 121,075
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
14S5A01400	Integrated Circuit	U38		26.018600	1	25551442.237972
14S5A01402	Integrated Circuit	U14		26.018600	1	25551442.237972
14S5A12506	Integrated Circuit	U27		26.018600	1	25551442.237972
14S5A12509	Integrated Circuit	U55,U56		26.018600	2	14194252.866846
14S5A13210	Integrated Circuit	U8		26.018600	1	25551442.237972
14S6203204	Integrated Circuit	SPI1		11.063278	1	58231413.220643
14S6324640	Integrated Circuit			11.063278	1	58231413.220643
14S9108500	Integrated Circuit	U16		43.803003	1	11739202.588727
14S9144200	Integrated Circuit	U49	14.1	113.644066	1	4524761.821890
14S9751100	Integrated Circuit	U22	20.3	168.335819	1	3054681.603882
1540710280	Resistor	RP12,RP13,R P15		9.971436	3	21639329.074793
1540712180	Resistor	RP10		9.971436	1	51606907.671214
1540727280	Resistor	RP1,RP3,RP6 ,RP7, RP8,RP9		9.971436	6	12090001.526571
1540733085	Resistor	RP2		9.971436	1	51606907.671214
1540747285	Resistor	RP11		9.971436	1	51606907.671214
1540751082	Resistor	RP5		9.971436	1	51606907.671214
16515A099P	Connection	DIMM1,DIM M2		16.184835	2	20390152.380746
1652503209	Connection	DC1		16.184835	1	35685591.360212
1652517209	Connection	AUDIO1		16.184835	1	35685591.360212
1652522207	Connection	LAN1_USB01		16.184835	2	20390152.380746
1653003101	Connection	LAN2_USB23 AT_ATX_SEL 1,CLRTC1, LVDSBRC1		16.184835	3	14515880.849373
1653003102	Connection	CN11		16.184835	1	35685591.360212
1653003201	Connection	LVDS_PVSEL 1		16.184835	1	35685591.360212
165300420F	Connection	KBMS1		16.184835	1	35685591.360212
165300420L	Connection	CN1		16.184835	1	35685591.360212
1653005200	Connection	FP1		16.184835	1	35685591.360212
1653005201	Connection	CN10,CN2,U SB45_1, USB67_1		16.184835	4	11344857.509064
1653212100	Connection	CN3		16.184835	1	35685591.360212

File Name: NVR-CV.rfp
Assembly: 9697CV2003-D
Ref Des:
Description:

Failure Rate: 8259.335503
MTBF (hrs): 121,075
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1653300107	Connection	AT_ATX_SEL 1_2-3, CLRTC1_1-2, LVDSBRC1_1 -2, LVDS_PVSEL 1_2-4, LVDS_PVSEL 1_3-5, P1_CN10_7- 8		16.184835	6	7958792.615968
1654030006	Connection	LVDS1		16.184835	1	35685591.360212
1654232203	Connection	PCIE4X_1		16.184835	1	35685591.360212
1654400911	Connection	COM1		16.184835	1	35685591.360212
1654400912	Connection	COM2		16.184835	1	35685591.360212
1654401530	Connection	VGA1		16.184835	1	35685591.360212
1654402430	Connection	DVI1		16.184835	1	35685591.360212
1654900701	Connection	SATA0,SATA 1,SATA2, SATA3,SATA 4,SATA5		16.184835	6	7958792.615968
1655004014	Connection	CPU_FAN1,S YS_FAN1		16.184835	2	20390152.380746
1655004017	Connection	SATA_PWR1		16.184835	1	35685591.360212
1655305025	Connection	LVDS_BK1		16.184835	1	35685591.360212
1655404020	Connection	ATX1		16.184835	1	35685591.360212
1750113010	Miscellaneous	BATT1		306.000000	1	1681683.006787
1750220323	Connection	BT1		16.184835	1	35685591.360212
1752002700	Miscellaneous	FS1,FS2		2.400000	2	143944727.196625
1752015003	Miscellaneous	F1,F2,F3,F4, F5		2.400000	5	65101085.623547

File Name: NVR-CV.rfp
Assembly: 9697T27001-D
Ref Des:
Description:

Failure Rate: 217.543034
MTBF (hrs): 4,596,792
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1053525568	Resistor	R13,R14		2.547039	2	154078778.388085
1054549979	Resistor	R12,R15		2.547039	2	154078778.388085
105A500133	Resistor	R11,R4,R9		2.547039	3	107020754.986850
105A500139	Resistor	R5		2.547039	1	282340674.079668
105A501033	Resistor	R1,R10,R2,R7		2.547039	4	82309758.689546
105A501053	Resistor	R8		2.547039	1	282340674.079668
105A504723	Resistor	R16		2.547039	1	282340674.079668
105A702033	Resistor	R3		2.547039	1	282340674.079668
1189656196	Capacitor	C5		4.744484	1	159663026.715137
11C2510480	Capacitor	C1,C3,C6		1.128806	3	257514172.353070
11E1522680	Capacitor	C2		1.128806	1	704977644.692287
1301005444	Semiconductor	D1		7.793411	1	92807310.010983
1310390411	Semiconductor	Q1		22.463360	1	31642600.748419
14S5974741	Integrated Circuit	U1		26.018600	1	25551442.237972
14S5A12509	Integrated Circuit	U3		26.018600	1	25551442.237972
14S5A25701	Integrated Circuit	U2		26.018600	1	25551442.237972
165300420F	Connection	CN1		16.184835	1	35685591.360212
1655424022	Connection	ATX1		16.184835	1	35685591.360212