

# ICS-6270

## Reliability Prediction Report (MTBF)

Summary	Failure Rate: 9872.437028 MTBF: 101,292 Hours
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Issue date	QE Manager	Test Engineer
2017-10-19	KJ Wang	Max Chang

# Reliability Prediction (MTBF)

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**I . Model Name:** ICS-6270

**II . Prediction Date:** October. 19th, 2017

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

**IV . Predicted by:** Max Chang

**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:**

ICS-6270 (M/B: 9697627004-D & 9697T46104-D):

- Failure Rate: 9872.437028

- MTBF: 101,292 Hours

**Reliability Prediction  
Summary**

**File Name:** ICS-6270.rfp  
**System:** System  
**Ref Des:**  
**Description:**

**Failure Rate:** 9872.437028  
**MTBF (hrs):** 101,292  
**Temperature:** 30  
**Environment:** GF, GU - Ground Fixed, Uncontrolled

Assembly Name	Part Number	Ref Des	Quantity	Failure Rate	MTBF
ICS-6270	System		1	9872.437028	101,292
9697627004-D			1	7446.836053	134,285
9697T46104-D			1	2589.843685	386,124

**File Name:** ICS-6270.rfp  
**Assembly:**  
**Ref Des:**  
**Description:**

**Failure Rate:** 7446.836053  
**MTBF (hrs):** 134,285  
**Temperature:** 30  
**Environment:** GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Unit Failure Rate	Quantity	Total Failure Rate
1050500104	Resistor	R562,R567,R642,R672	2.547039	4	12.149228
1050501004	Resistor	R643,R644	2.547039	2	6.490186
1050501054	Resistor	R520,R556,R564,R888,R896	2.547039	5	14.923560
1050501064	Resistor	R102	2.547039	1	3.541821
1050501224	Resistor	R274,R312,R805,R813	2.547039	4	12.149228
1050502004	Resistor	R546,R646,R648	2.547039	3	9.343982
1050502204	Resistor	R26,R626	2.547039	2	6.490186
1050502224	Resistor	R219,R45,R690,R703,R704,R726,R731,R743,R753,R879,R882,R886,R889,R935	2.547039	14	39.250711
1050503324	Resistor	R249,R256,R267,R270,R283,R284,R285,R287,R288,R292,R295,R350,R351,R352,R353,R356,R357,R358,R366,R367,R409,R418,R66,R847,R850,R851,R875,R906	2.547039	28	76.397179
1050503334	Resistor	R372,R396,R641,R755,R757,R766,R772,R902,R909	2.547039	9	25.803491

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Part Number	Category	Ref Des	Unit Failure Rate	Quantity	Total Failure Rate
1050503334-00	Resistor	R198,R76 3	2.547039	2	6.490186
1050503624	Resistor	R196	2.547039	1	3.541821
1050504334	Resistor	R558	2.547039	1	3.541821
1050504724	Resistor	R118,R15 3,R205, R242,R24 3,R542, R605,R61 0,R615, R620,R68 6,R733, R745,R74 6,R747, R948,R94 9,R950,R9 6	2.547039	19	52.578486
1050504724-00	Resistor	R405,R43 3,R436	2.547039	3	9.343982
1050504734-00	Resistor	R566,R64 9	2.547039	2	6.490186
1050504764	Resistor	R30,R529, R568	2.547039	3	9.343982
1050505634-00	Resistor	R251	2.547039	1	3.541821
1050506224	Resistor	R74	2.547039	1	3.541821
1050510034	Resistor	R174,R33, R428,R53 0, R561,R57 0,R587, R598,R66 7,R933, R934,R94 4	2.547039	12	33.890167
1050510504	Resistor	R59,R60	2.547039	2	6.490186
1050511304	Resistor	R93	2.547039	1	3.541821
1050512034-00	Resistor	R426,R94 1	2.547039	2	6.490186
1050512104	Resistor	R263	2.547039	1	3.541821
1050512124	Resistor	R754,R81 1	2.547039	2	6.490186
1050513704	Resistor	R90	2.547039	1	3.541821
1050514034	Resistor	R533	2.547039	1	3.541821
1050516004	Resistor	R480,R48 1,R484, R485,R48 7,R488, R920,R92 1	2.547039	8	23.134533

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1050516524	Resistor	R539,R62 1	2.547039	2	6.490186
1050517804	Resistor	R545,R64 7	2.547039	2	6.490186
1050520004	Resistor	R103,R19 3,R85	2.547039	3	9.343982
1050520034	Resistor	R117	2.547039	1	3.541821
1050521024	Resistor	R91	2.547039	1	3.541821
1050522004	Resistor	R719	2.547039	1	3.541821
1050522124	Resistor	R538	2.547039	1	3.541821
1050524904	Resistor	R20,R493	2.547039	2	6.490186
1050527034	Resistor	R574	2.547039	1	3.541821
1050528734	Resistor	R528	2.547039	1	3.541821
1050530124	Resistor	R619	2.547039	1	3.541821
1050531624	Resistor	R527	2.547039	1	3.541821
1050532464	Resistor	R266	2.547039	1	3.541821
1050533034	Resistor	R111,R67 7	2.547039	2	6.490186
1050533204	Resistor	R547,R55 1	2.547039	2	6.490186
1050536514	Resistor	R494,R49 5,R6,R8	2.547039	4	12.149228
1050539004	Resistor	R696	2.547039	1	3.541821
1050540204	Resistor	R123,R61 7,R80	2.547039	3	9.343982
1050545324	Resistor	R557	2.547039	1	3.541821
1050547004	Resistor	R32,R801, R812	2.547039	3	9.343982
1050549904	Resistor	R525,R55 5,R565	2.547039	3	9.343982
1050568124	Resistor	R629	2.547039	1	3.541821
1050580614	Resistor	R582	2.547039	1	3.541821
1050582034	Resistor	R511	2.547039	1	3.541821
1050582504	Resistor	R97	2.547039	1	3.541821
1050588724	Resistor	R653	2.547039	1	3.541821
1050593104	Resistor	R95	2.547039	1	3.541821
1050702734	Resistor	R689	2.547039	1	3.541821
1050708234	Resistor	R24	2.547039	1	3.541821
1050709124	Resistor	R236	2.547039	1	3.541821
1053500489	Resistor	R2	2.547039	1	3.541821
1054600289	Resistor	R22	2.547039	1	3.541821
1054700389	Resistor	R499	2.547039	1	3.541821

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**Ref Des:**

**Description:**

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Part Number	Category	Ref Des	Unit Failure Rate	Quantity	Total Failure Rate
1059700001	Resistor	R1291,R1292,R1293, R38,R39,R563,R628, R633,R814,R952	2.547039	10	28.506324
105A500103	Resistor	R105,R121,R23,R618, R659	2.547039	5	14.923560
105A500113	Resistor	R40	2.547039	1	3.541821
105A500139	Resistor	R172,R237,R257, R260,R665,R721, R744,R788,R789, R791,R799,R823, R863,R865,R868, R938,R942	2.547039	17	47.258036



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105A501039	Resistor	R130,R142,R145,R15, R157,R163,R167, R168,R182,R203, R217,R239,R248, R255,R262,R264, R268,R277,R306, R319,R331,R344, R430,R444,R508, R509,R514,R515, R536,R554,R575, R588,R600,R603, R635,R684,R694, R720,R750,R751, R857,R858,R859, R860,R861,R862, R872,R876,R	2.547039	55	147.207034
105A501053	Resistor	R419	2.547039	1	3.541821
105A501139	Resistor	R215,R590	2.547039	2	6.490186
105A501323	Resistor	R537,R810	2.547039	2	6.490186
105A501539	Resistor	R298,R67, R752	2.547039	3	9.343982
105A502039	Resistor	R16,R391, R392,R505, R510,R519,R589	2.547039	7	20.411813
105A502263	Resistor	R175,R43, R521,R671	2.547039	4	12.149228
105A503039	Resistor	R326	2.547039	1	3.541821

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105A503309	Resistor	R1247,R1251,R1252, R1272,R210,R245, R387,R402,R439,R72, R78	2.547039	11	31.201544
105A505109	Resistor	R192,R233,R333, R716,R728,R742	2.547039	6	17.675978
105A506829	Resistor	R269,R275,R369, R370,R749	2.547039	5	14.923560
105A510009	Resistor	R46,R531, R532,R535, R540,R553,R592, R593,R623,R624, R662,R717,R718, R729,R873,R895	2.547039	16	44.592810
105A512039	Resistor	R244	2.547039	1	3.541821
105A513323	Resistor	R101	2.547039	1	3.541821
105A515009	Resistor	R408,R412,R417, R489,R491,R492, R848,R852,R914, R915,R916,R951	2.547039	12	33.890167
105A515423	Resistor	R21,R632	2.547039	2	6.490186
105A516903	Resistor	R223	2.547039	1	3.541821
105A521039	Resistor	R427,R943	2.547039	2	6.490186
105A532429	Resistor	R526	2.547039	1	3.541821
105A534819	Resistor	R631	2.547039	1	3.541821
105A534823	Resistor	R31	2.547039	1	3.541821
105A548723	Resistor	R594	2.547039	1	3.541821
105A549919	Resistor	R384,R385,R424, R923	2.547039	4	12.149228
105A553629	Resistor	R650	2.547039	1	3.541821
105A560469	Resistor	R141	2.547039	1	3.541821
105A593123	Resistor	R581	2.547039	1	3.541821

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Part Number	Category	Ref Des	Unit Failure Rate	Quantity	Total Failure Rate
105A700003	Resistor	R104,R106,R11,R214,R216,R258,R276,R28,R29,R299,R332,R34,R36,R37,R44,R48,R51,R534,R55,R579,R599,R601,R64,R954	2.547039	24	65.832183
105A700009	Resistor	R1,R107,R113,R115,R12,R1224,R124,R1273,R1275,R1276,R1277,R1279,R128,R135,R138,R14,R146,R166,R184,R185,R197,R199,R201,R208,R212,R213,R220,R25,R259,R261,R265,R272,R279,R282,R286,R289,R290,R291,R294,R297,R3,R301,R302,R305,R317,R347,R348,R349,R3	2.547039	138	362.769352

**Reliability Prediction  
Summary**

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Part Number	Category	Ref Des	Unit Failure Rate	Quantity	Total Failure Rate
105A70000A	Resistor	R120,R122,R134,R27,R341,R380,R399,R506,R569,R808,R815,R817,R818,R839,R840,R874,R878,R897,R955	2.547039	19	52.578486
105A700139	Resistor	R112,R17,R18,R189,R247,R441,R658,R663,R7,R708,R75,R807,R855	2.547039	13	36.573004

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**Failure Rate:** 7446.836053

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Part Number	Category	Ref Des	Unit Failure Rate	Quantity	Total Failure Rate
105A701039	Resistor	R1228,R1241,R1244, R1271,R133,R188, R194,R202,R224, R235,R313,R314, R320,R321,R322, R323,R329,R330, R335,R336,R337, R338,R342,R343, R360,R361,R368, R374,R375,R382, R383,R386,R397, R401,R404,R410, R414,R415,R420, R422,R434,R496, R497,R504,R63,R640, R65,R66	2.547039	74	196.739509
105A701069	Resistor	R176	2.547039	1	3.541821
105A703309	Resistor	R398,R400,R423, R432	2.547039	4	12.149228
105A703329	Resistor	R293,R413,R416, R421	2.547039	4	12.149228
105A704729	Resistor	R154,R156,R169, R232,R234,R35,R395, R507,R544,R607, R803,R856,R890	2.547039	13	36.573004
105A705129	Resistor	R47,R627	2.547039	2	6.490186
105A706809	Resistor	R225	2.547039	1	3.541821

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Part Number	Category	Ref Des	Unit Failure Rate	Quantity	Total Failure Rate
105A707509	Resistor	R930,R931,R932	2.547039	3	9.343982
105A708209	Resistor	R661	2.547039	1	3.541821
105A708229	Resistor	R132	2.547039	1	3.541821
105A710009	Resistor	R41,R498,R580,R625,R630,R70,R71	2.547039	7	20.411813
105A710039	Resistor	R1278,R676,R912	2.547039	3	9.343982
105A715009	Resistor	R136,R226,R68	2.547039	3	9.343982
105A716533	Resistor	R42	2.547039	1	3.541821
105A717433	Resistor	R250	2.547039	1	3.541821
105A733009	Resistor	R482,R486,R918,R919	2.547039	4	12.149228
105A747009	Resistor	R849,R853	2.547039	2	6.490186
106B510034	Resistor	RT1,RT4	2.547039	2	6.490186
106B704723	Resistor	RT2,RT3	2.547039	2	6.490186
106BA01033	Resistor	R131,R271	2.547039	2	6.490186
1121415090	Capacitor	C439	1.128806	1	1.418485
1121501050	Capacitor	C2	1.128806	1	1.418485

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1121501690	Capacitor	C113,C175,C180,C185,C192,C207,C210,C211,C212,C219,C220,C221,C223,C225,C233,C234,C235,C236,C237,C243,C244,C245,C246,C247,C248,C251,C255,C256,C260,C261,C263,C264,C272,C282,C293,C346,C406,C409,C415,C419,C421,C426,C429,C430,C431,C434,C435,C458,	1.128806	72	83.667654
1121501691	Capacitor	C127,C131,C141,C203,C314,C325,C440,C442,C88	1.128806	9	11.005528
1122522890	Capacitor	C170,C171,C181,C24,C342	1.128806	5	6.274805
1124410190	Capacitor	C390	1.128806	1	1.418485
1124410191	Capacitor	C391	1.128806	1	1.418485
1124418090	Capacitor	C129,C136	1.128806	2	2.664608

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1124418190	Capacitor	C108,C117,C130,C213,C214,C215,C216,C222,C228,C240,C253,C96	1.128806	12	14.522865
1124427090	Capacitor	C274,C275,C280,C281,C299,C308,C582,C583	1.128806	8	9.828323
1124468090	Capacitor	C109,C33,C349	1.128806	3	3.883281
1124522190	Capacitor	C388	1.128806	1	1.418485
1124522680	Capacitor	C371,C372,C392	1.128806	3	3.883281
1124533191	Capacitor	C202,C259	1.128806	2	2.664608
1124533280	Capacitor	C151,C155,C23,C404,C410,C70	1.128806	6	7.463816
1124539180	Capacitor	C31	1.128806	1	1.418485
1124547190	Capacitor	C110	1.128806	1	1.418485
1129522790	Capacitor	C544,C560	1.128806	2	2.664608
1129601080	Capacitor	C363,C393,C50	1.128806	3	3.883281
1129610080	Capacitor	C16,C18,C19,C258,C273,C277,C278,C286,C290,C333,C334,C335,C336,C347,C351,C354,C487,C495,C513,C514,C520,C538,C540,C542,C547,C556,C566,C567,C575,C578,C581	1.128806	31	36.563603



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1129610260	Capacitor	C326,C594,C595,C605	1.128806	4	5.079407
1129701690	Capacitor	C14,C15,C329,C330,C331,C332,C337,C348,C357,C451,C464,C466	1.128806	12	14.522865
1129701790	Capacitor	C48	1.128806	1	1.418485
1129710091	Capacitor	C584,C585,C586,C596,C597,C598	1.128806	6	7.463816
1129710391	Capacitor	C445	1.128806	1	1.418485
1129722091	Capacitor	C441,C587,C588,C589	1.128806	4	5.079407
118162719B	Capacitor	C12,C5,C6	4.744484	3	16.835266
1184668090	Capacitor	C38,C67	4.744484	2	11.621225
1189610153	Capacitor	C191	4.744484	1	6.263191
118A622192	Capacitor	C116,C327,C97	4.744484	3	16.835266
118A6221B0	Capacitor	C601,C602	4.744484	2	11.621225
118C6331B1	Capacitor	C163	4.744484	1	6.263191
118C639191	Capacitor	C119,C120,C205,C52,C55	4.744484	5	27.067865
11A4310040	Capacitor	C145,C149	1.128806	2	2.664608
11A4416080	Capacitor	C302,C315	1.128806	2	2.664608
11A5447080	Capacitor	C374	1.128806	1	1.418485
11C1410440	Capacitor	C381,C427	1.128806	2	2.664608
11C1501050	Capacitor	C377	1.128806	1	1.418485
11C1522390	Capacitor	C397	1.128806	1	1.418485
11C1539840	Capacitor	C289,C295,C493,C501	1.128806	4	5.079407
11C1547890	Capacitor	C356	1.128806	1	1.418485
11C1647780	Capacitor	C137,C425,C49	1.128806	3	3.883281
11C2501790	Capacitor	C319,C322,C599,C600	1.128806	4	5.079407

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11C2510480	Capacitor	C183,C184,C364,C60, C609	1.128806	5	6.274805
11C2522480	Capacitor	C362,C382,C44	1.128806	3	3.883281
11C4501650	Capacitor	C399	1.128806	1	1.418485
11C4501790	Capacitor	C450,C478,C483,C490,C494	1.128806	5	6.274805
11C4510240	Capacitor	C156,C160	1.128806	2	2.664608
11C4510480	Capacitor	C56	1.128806	1	1.418485
11C4522191	Capacitor	C358,C379,C385	1.128806	3	3.883281
11C4522290	Capacitor	C239	1.128806	1	1.418485
11C4547690	Capacitor	C400	1.128806	1	1.418485
11C4556690	Capacitor	C465	1.128806	1	1.418485
11C9510490	Capacitor	C270,C271,C276,C279,C29,C292,C298,C301,C303,C304,C305,C306,C307,C309,C316,C317,C318,C320,C37,C389,C401,C43,C432,C489,C491,C496,C497,C498,C499,C508,C515,C517,C519,C521,C522,C523,C524,C525,C526,C527,C529,C530,C531,C532,C533,C534,C535,C536,C53	1.128806	77	89.393401

**File Name:** ICS-6270.rfp  
**Assembly:**  
**Ref Des:**  
**Description:**

**Failure Rate:** 7446.836053  
**MTBF (hrs):** 134,285  
**Temperature:** 30  
**Environment:** GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Unit Failure Rate	Quantity	Total Failure Rate
11E1522060	Capacitor	C1,C3,C33 9,C340, C341,C4	1.128806	6	7.463816
11E1522440	Capacitor	C32	1.128806	1	1.418485
11E1522680	Capacitor	C266,C26 7,C360, C420,C47, C604	1.128806	6	7.463816
11E1547650	Capacitor	C135,C14 6,C176	1.128806	3	3.883281
11E2501080	Capacitor	C196,C35 9,C437,C5 9	1.128806	4	5.079407
11E2501690	Capacitor	C147,C14 8,C154, C166,C16 9,C189, C190,C19 7,C199, C206,C21 7,C227, C231,C23 2,C241, C252,C25 4,C265, C268,C28 8,C291, C294,C31 0,C311, C312,C31 3,C321, C370,C39 6,C444, C479,C54 3,C545, C546,C54 8,C550, C552,C55 3,C561, C568,C56 9,C62	1.128806	42	49.238012
11E2510010	Capacitor	C296	1.128806	1	1.418485
11E2622011	Capacitor	C157,C15 8,C167, C168,C35, C367,C36 8, C402,C40 3,C428, C433,C65, C8,C90	1.128806	14	16.858773

**File Name:** ICS-6270.rfp

**Assembly:**

**Ref Des:**

**Description:**

**Failure Rate:** 7446.836053

**MTBF (hrs):** 134,285

**Temperature:** 30

**Environment:** GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Unit Failure Rate	Quantity	Total Failure Rate
11E4510090	Capacitor	C13,C373, C378,C39 4	1.128806	4	5.079407
11E4510440	Capacitor	C10,C178, C36,C78	1.128806	4	5.079407
11E9501090	Capacitor	C100,C10 1,C102, C103,C10 4,C105, C106,C10 7,C111, C112,C11 4,C115, C118,C12 1,C122, C123,C12 4,C125, C128,C13 2,C133, C138,C13 9,C159, C161,C16 2,C174, C177,C34 4,C350, C352,C35 3,C355, C386,C39 8,C422, C436,C72, C73,C74, C75,C76,C 77,C80, C82,C83,C 84,C86, C87,C89,C 91	1.128806	56	65.324112
11E9547680	Capacitor	C369	1.128806	1	1.418485
11E9547682	Capacitor	C218,C23 0,C242, C250,C25 7,C470, C507	1.128806	7	8.647986

**File Name:** ICS-6270.rfp  
**Assembly:**  
**Ref Des:**  
**Description:**

**Failure Rate:** 7446.836053  
**MTBF (hrs):** 134,285  
**Temperature:** 30  
**Environment:** GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Unit Failure Rate	Quantity	Total Failure Rate
11E9610080	Capacitor	C153,C164,C173,C204,C209,C224,C238,C249,C262,C283,C324,C452,C472,C474,C516,C603	1.128806	16	19.189261
11E9622050	Capacitor	C269	1.128806	1	1.418485
11E9622052	Capacitor	C193	1.128806	1	1.418485
11E9622080	Capacitor	C150,C186,C21,C22	1.128806	19	22.676921
		C226,C27,C28,C361,C383,C384,C40,C42			
		C455,C468,C469,C486,C500,C53,C54			
11EA647010	Capacitor	C142,C143,C144,C179,C188,C20,C201,C297,C338,C345,C408,C424,C446,C447,C448,C456,C457,C488,C492,C528,C58,C61,C69,C81	1.128806	24	28.473303
11EB501040	Capacitor	C284,C285,C323	1.128806	3	3.883281
11EB522011	Capacitor	C126,C140,C165,C387,C407,C45,C46	1.128806	11	13.352457
		C51,C57,C68,C71			
11EB547440	Capacitor	C376	1.128806	1	1.418485
11EB610050	Capacitor	C287	1.128806	1	1.418485

**File Name:** ICS-6270.rfp  
**Assembly:**  
**Ref Des:**  
**Description:**

**Failure Rate:** 7446.836053  
**MTBF (hrs):** 134,285  
**Temperature:** 30  
**Environment:** GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Unit Failure Rate	Quantity	Total Failure Rate
121110226Y	Inductor	L4,L5,L7	4.944252	3	17.432754
1211104271	Inductor	L9	4.944252	1	6.461578
1211106879	Inductor	L8	4.944252	1	6.461578
1211122079	Inductor	L10	4.944252	1	6.461578
1211133075	Inductor	L3,L6	4.944252	2	12.019077
121113307T	Inductor	L1	4.944252	1	6.461578
1211147071	Inductor	L2	4.944252	1	6.461578
1212306030	Inductor	FB11,FB12,FB14	4.944252	3	17.432754
121230603Z	Inductor	FB13,FB17,FB18,FB19,FB20	4.944252	5	28.064754
1212312063	Inductor	FB10,FB16	4.944252	2	12.019077
12123A000E	Inductor	FB8,FB9	4.944252	2	12.019077
12123C000C	Inductor	L11,L12,L13,L14,L15,L16	4.944252	6	33.271337
12123C0026	Inductor	FB1,FB15,FB2,FB3,FB4,FB5,FB6,FB7	4.944252	8	43.717664
12143B0002	Inductor	CH1,CH2,CH3,CH4	4.944252	4	22.772366
12310025A8	Miscellaneous	Y4,Y5,Y6,Y8	19.200000	4	227.882136
12310027A2	Miscellaneous	Y7	19.200000	1	41.938810
1231019251	Miscellaneous	Y2	19.200000	1	41.938810
1231332726	Miscellaneous	Y1	19.200000	1	41.938810
12330048A1	Miscellaneous	Y3	19.200000	1	41.938810
1252NS8920	Semiconductor	TF1,TF2,TF3,TF4	22.463360	4	107.867794
1301000541	Semiconductor	D1	22.463360	1	31.602965
1301000560	Semiconductor	D13	22.463360	1	31.602965
1301005440	Semiconductor	D6	22.463360	1	31.602965
1301010600	Semiconductor	D2,D3,D4	22.463360	3	83.033515
1301053040	Semiconductor	D10,D11	22.463360	2	57.753076
1301400642	Semiconductor	D18,D9	22.463360	2	57.753076
1304001120	Optical Device	LED2	79.003355	1	153.913100
1304L51460	Optical Device	LED1	79.003355	1	153.913100
1305099140	Semiconductor	D7,D8	7.793411	2	19.771405
1305100541	Semiconductor	U21,U22,U23,U24,U26,U27,U28,U29	22.463360	8	205.039971

**File Name:** ICS-6270.rfp  
**Assembly:**  
**Ref Des:**  
**Description:**

**Failure Rate:** 7446.836053  
**MTBF (hrs):** 134,285  
**Temperature:** 30  
**Environment:** GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Unit Failure Rate	Quantity	Total Failure Rate
13090099W0	Semiconductor	D12,D14, D15,D16, D17	22.463360	5	132.418067
1310390411	Semiconductor	Q79	22.463360	1	31.602965
1310390413	Semiconductor	Q124,Q50 ,Q54,Q55, Q77	22.463360	5	132.418067
1311390612	Semiconductor	Q17,Q52, Q57	22.463360	3	83.033515
131411171J	Semiconductor	U9	22.463360	1	31.602965
1315009210	Semiconductor	Q15	22.463360	1	31.602965
1315009250	Semiconductor	Q42	22.463360	1	31.602965
1315088200	Semiconductor	Q33,Q34, Q37	22.463360	3	83.033515
1315200312	Semiconductor	Q10,Q11, Q12,Q13, Q16,Q9	22.463360	6	156.767054
1315230211	Semiconductor	Q64,Q68	22.463360	2	57.753076
1315230511	Semiconductor	Q65,Q69	22.463360	2	57.753076
1315443512	Semiconductor	Q3	22.463360	1	31.602965
1315700211	Semiconductor	Q28	22.463360	1	31.602965
1315700216	Semiconductor	Q22,Q30, Q31,Q4,Q 43, Q44,Q45, Q46,Q5,Q 6, Q80	22.463360	11	276.325176
1315720010	Semiconductor	Q1	22.463360	1	31.602965
1315865000	Semiconductor	Q32,Q35, Q36	22.463360	3	83.033515
1315EM6K10	Semiconductor	Q125,Q12 7,Q128, Q129,Q13 0,Q131, Q132,Q13 3,Q134,Q 14, Q2,Q24,Q 25,Q40,Q 41, Q49,Q81, Q82,Q83, Q85,Q86, Q87,Q88	22.463360	23	558.921210
1430006710	Integrated Circuit	U1,U31,U 34	43.803003	3	203.118269
1430036010	Integrated Circuit	U35,U38	43.803003	2	146.310248
1430051750	Integrated Circuit	U36	43.803003	1	85.184662
1430080650	Integrated Circuit	U40	43.803003	1	85.184662
1430082480	Integrated Circuit	U32	43.803003	1	85.184662

**File Name:** ICS-6270.rfp  
**Assembly:**  
**Ref Des:**  
**Description:**

**Failure Rate:** 7446.836053  
**MTBF (hrs):** 134,285  
**Temperature:** 30  
**Environment:** GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Unit Failure Rate	Quantity	Total Failure Rate
14308239B0	Integrated Circuit	U6	43.803003	1	85.184662
1440002130	Integrated Circuit	U12	43.803003	1	85.184662
1440211AT0	Integrated Circuit	U14,U15, U19,U46	43.803003	4	257.787974
14407517A0	Integrated Circuit	U18	26.018600	1	39.136734
1440N33500	Integrated Circuit	U37	21.706765	1	42.213622
145901G080	Integrated Circuit	U51	26.018600	1	39.136734
1462251281	Integrated Circuit		43.803003	1	85.184662
1462S270A0	Integrated Circuit	U20	11.063278	1	17.172862
1482640HC1	Integrated Circuit	U43	43.803003	1	85.184662
1490011840	Integrated Circuit	U42	43.803003	1	85.184662
149TS01040	Integrated Circuit	U58,U59	43.803003	2	146.310248
14S3104500	Integrated Circuit	U25,U30	43.803003	2	146.310248
14S4048501	Integrated Circuit	U7,U8	43.803003	2	146.310248
14S4081102	Integrated Circuit	U44,U47, U54,U55	43.803003	4	257.787974
14S4872800	Integrated Circuit	U41	43.803003	1	85.184662
14S5812502	Integrated Circuit	U4	26.018600	1	39.136734
14S5912300	Integrated Circuit	U48	26.018600	1	39.136734
14S5974741	Integrated Circuit	U2,U50	26.018600	2	70.451049
14S5A01400	Integrated Circuit	U5	26.018600	1	39.136734
14S5A12506	Integrated Circuit	U16	26.018600	1	39.136734
1540775082	Resistor	RP3,RP4,R P5,RP6	9.971436	4	58.653237
1540782080	Resistor	RP1	9.971436	1	19.377251
1540782280	Resistor	RP2	9.971436	1	19.377251
1601006BR0	Connection	SW1	16.184835	1	28.022514
1651508010	Connection	CN5	16.184835	1	28.022514
16515A2994	Connection	DIMM1	16.184835	1	28.022514
1652202208	Connection	CN1	16.184835	1	28.022514
1652848206	Connection	CN18	16.184835	1	28.022514
165300210C	Connection	CN15,CN1 6	16.184835	2	49.043282
1653003101	Connection	CN7,JP1	16.184835	2	49.043282
165300420Q	Connection	CN26	16.184835	1	28.022514
1653005201	Connection	CN12,CN3	16.184835	2	49.043282
1653300102	Connection	CN7(1- 2),JP1(2- 3)	16.184835	2	49.043282
1653924110	Connection	CN24	16.184835	1	28.022514
1654008021	Connection	CN8	16.184835	1	28.022514
1654226303	Connection	CN4	16.184835	1	28.022514
1654409103	Connection	CN23	16.184835	1	28.022514
1654801831	Connection	CN17	16.184835	1	28.022514
165490700G	Connection	CN13	16.184835	1	28.022514
1655004011	Connection	CN9	16.184835	1	28.022514



**File Name:** ICS-6270.rfp

**Failure Rate:** 7446.836053

**Assembly:**

**MTBF (hrs):** 134,285

**Ref Des:**

**Temperature:** 30

**Description:**

**Environment:** GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Unit Failure Rate	Quantity	Total Failure Rate
1655004018	Connection	CPU_FAN 1	16.184835	1	28.022514
1655306023	Connection	CN2	16.184835	1	28.022514
1655902030	Connection	CN11	16.184835	1	28.022514
1655912032	Connection	LPC1	16.184835	1	28.022514
1655913030	Connection	CN14	16.184835	1	28.022514
175011901C	Connection	CN11	16.184835	1	28.022514
1751300006	Relay	RELAY1,R ELAY2, RELAY3,R ELAY4, RELAY5,R ELAY6, RELAY7,R ELAY8	9.488968	8	111.693830
1752001603	Miscellaneous	FS3	2.400000	1	3.927328
1752002500	Miscellaneous	FS1	2.400000	1	3.927328
1752002700	Miscellaneous	FS2,FS4	2.400000	2	6.947111

**File Name:** ICS-6270.rfp  
**Assembly:**  
**Ref Des:**  
**Description:**

**Failure Rate:** 2589.843685  
**MTBF (hrs):** 386,124  
**Temperature:** 30  
**Environment:** GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Unit Failure Rate	Quantity	Total Failure Rate
1050501054	Resistor	R195,R196	2.547039	2	6.490186
1050501224	Resistor	R173,R175	2.547039	2	6.490186
1050502224	Resistor	R206,R209,R210,R211,R223,R227	2.547039	6	17.675978
1050503324	Resistor	R17,R38,R39,R44,R46,R47,R48,R66,R83,R85,R93,R95,R96,R97	2.547039	14	39.250711
1050503334	Resistor	R18,R21,R67,R72	2.547039	4	12.149228
1050504724	Resistor	R13,R62	2.547039	2	6.490186
1050516004	Resistor	R131,R132,R137,R139,R149,R150,R151,R152	2.547039	8	23.134533
1050533004	Resistor	R153,R154	2.547039	2	6.490186
1050539004	Resistor	R190	2.547039	1	3.541821
1050702734	Resistor	R185	2.547039	1	3.541821
1052700008	Resistor	R954,R955	2.547039	2	6.490186
105A500139	Resistor	R135,R145,R225	2.547039	3	9.343982
105A501039	Resistor	R116,R117,R119,R120,R121,R122,R124,R125,R199	2.547039	9	25.803491
105A501053	Resistor	R193	2.547039	1	3.541821
105A502039	Resistor	R230	2.547039	1	3.541821
105A503309	Resistor	R218,R219	2.547039	2	6.490186
105A506829	Resistor	R201,R202,R228	2.547039	3	9.343982
105A510009	Resistor	R207,R208	2.547039	2	6.490186
105A512039	Resistor	R236	2.547039	1	3.541821

**File Name:** ICS-6270.rfp

**Assembly:**

**Ref Des:**

**Description:**

**Failure Rate:** 2589.843685

**MTBF (hrs):** 386,124

**Temperature:** 30

**Environment:** GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Unit Failure Rate	Quantity	Total Failure Rate
105A515009	Resistor	R212,R213,R214,R215,R216,R217	2.547039	6	17.675978
105A521039	Resistor	R235	2.547039	1	3.541821
105A549919	Resistor	R49,R98	2.547039	2	6.490186
105A700003	Resistor	R229	2.547039	1	3.541821
105A700009	Resistor	R100,R101,R102,R103,R104,R105,R106,R107,R108,R109,R110,R111,R112,R113,R114,R123,R126,R127,R128,R133,R143,R182,R186,R189,R191,R192,R197,R198,R2,R200,R203,R204,R205,R22,R23	2.547039	45	121.056938
105A70000A	Resistor	R24,R25,R30,R51,R70,R71,R73,R74,R79,R99	2.547039	6	17.675978
105A700139	Resistor	R1,R42,R45,R50,R91,R94,R169,R171,R187	2.547039	3	9.343982

**File Name:** ICS-6270.rfp  
**Assembly:**  
**Ref Des:**  
**Description:**

**Failure Rate:** 2589.843685  
**MTBF (hrs):** 386,124  
**Temperature:** 30  
**Environment:** GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Unit Failure Rate	Quantity	Total Failure Rate
105A701039	Resistor	R136,R138,R140,R146,R147,R148,R155,R156,R158,R160,R161,R162,R163,R164,R165,R166,R177,R180,R238,R239,R32,R33,R34,R35,R36,R40,R43,R55,R64,R65,R81,R82,R84,R86,R87,R89,R92	2.547039	39	105.330006
105A703309	Resistor	R26,R28,R29,R31,R37,R75,R77,R78,R80,R88	2.547039	10	28.506324
105A704729	Resistor	R167,R168,R183	2.547039	3	9.343982
105A707509	Resistor	R220,R221,R222	2.547039	3	9.343982
105A708229	Resistor	R184	2.547039	1	3.541821
105A710039	Resistor	R226	2.547039	1	3.541821
105A730009	Resistor	R155,R157,R159	2.547039	3	9.343982
105A747009	Resistor	R174,R176	2.547039	2	6.490186
1121501690	Capacitor	C1,C2,C28,C29,C3,C30,C80,C83,C84	1.128806	9	11.005528
1121501691	Capacitor	C129,C132,C86	1.128806	3	3.883281
1124418190	Capacitor	C73,C74,C75,C76,C77,C78,C79,C81	1.128806	8	9.828323
1124427090	Capacitor	C32,C33,C5,C6	1.128806	4	5.079407

**File Name:** ICS-6270.rfp

**Assembly:**

**Ref Des:**

**Description:**

**Failure Rate:** 2589.843685

**MTBF (hrs):** 386,124

**Temperature:** 30

**Environment:** GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Unit Failure Rate	Quantity	Total Failure Rate
1129522790	Capacitor	C59,C60	1.128806	2	2.664608
1129610080	Capacitor	C100,C102,C106,C109,C13,C23,C34,C40,C50,C61,C63,C65,C67,C69,C71,C8	1.128806	20	23.837670
		C89,C91,C93,C95			
1129610260	Capacitor	C22,C49	1.128806	2	2.664608
1129710091	Capacitor	C115,C116,C117,C121,C122,C123	1.128806	6	7.463816
1129710391	Capacitor	C87	1.128806	1	1.418485
1129722091	Capacitor	C118,C119,C120	1.128806	3	3.883281
118A622192	Capacitor	C134	1.128806	1	1.418485
11A4416080	Capacitor	C97,C98	1.128806	2	2.664608
11C1539840	Capacitor	C31,C4	1.128806	2	2.664608
11C9510490	Capacitor	C10,C11,C114,C12,C126,C14,C15,C16,C17,C18,C19,C20,C21,C24,C25,C26,C27,C35,C36,C37,C38,C41,C42,C43,C44,C45,C46,C47,C48,C51,C52,C53,C54,C62,C64,C66,C68,C70,C72,C88,C9	1.128806	41	48.087311
		C82,C85			
11E1522680	Capacitor	C82,C85	1.128806	2	2.664608

**File Name:** ICS-6270.rfp  
**Assembly:**  
**Ref Des:**  
**Description:**

**Failure Rate:** 2589.843685  
**MTBF (hrs):** 386,124  
**Temperature:** 30  
**Environment:** GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Unit Failure Rate	Quantity	Total Failure Rate
11E2501690	Capacitor	C101,C103,C104,C105,C107,C108,C110,C111,C112,C113,C56,C57,C58,C90,C92,C94,C96	1.128806	17	20.352794
11E4433090	Capacitor	C127	1.128806	1	1.418485
11E9610080	Capacitor	C128,C131	1.128806	2	2.664608
11EA647010	Capacitor	C39,C7	1.128806	2	2.664608
11EB501040	Capacitor	C130	1.128806	1	1.418485
1212306030	Inductor	FB1,FB2,FB3,FB4,FB5	4.944252	5	28.064754
121230603S	Inductor	FB6	4.944252	1	6.461578
121230603Z	Inductor	FB10,FB11,FB7,FB8,FB9	4.944252	5	28.064754
12123C000C	Inductor	L1,L2,L3,L4,L5,L6	4.944252	6	33.271337
12143B0002	Inductor	CH1,CH2	4.944252	2	12.019077
12310025A8	Miscellaneous	Y1,Y2	19.200000	2	112.942642
12310027A2	Miscellaneous	Y3	19.200000	1	41.938810
1252NS8920	Semiconductor	TF1,TF2	22.463360	2	57.753076
1301005440	Semiconductor	D1	22.463360	1	31.602965
1301400642	Semiconductor	D2	22.463360	1	31.602965
1305099140	Semiconductor	D3,D4,D5,D6,D7	22.463360	5	132.418067
1305100541	Semiconductor	U19,U20,U21,U22	22.463360	4	107.867794
1310390413	Semiconductor	Q18,Q19	22.463360	2	57.753076
1311390612	Semiconductor	Q14,Q15	22.463360	2	57.753076
1315070020	Semiconductor	Q10,Q20,Q21,Q3,Q4,Q7,Q8,Q9	22.463360	8	205.039971
1315230211	Semiconductor	Q5,Q6	22.463360	2	57.753076
1315230511	Semiconductor	Q1,Q2	22.463360	2	57.753076
13156K1N10	Semiconductor	Q11,Q12,Q13,Q25,Q26	22.463360	5	132.418067
1315700211	Semiconductor	Q22,Q23,Q24	22.463360	3	83.033515
1315700216	Semiconductor	Q16,Q17	22.463360	2	57.753076
1440211AT0	Integrated Circuit	U1,U4	43.803003	2	146.310248

**File Name:** ICS-6270.rfp

**Assembly:**

**Ref Des:**

**Description:**

**Failure Rate:** 2589.843685

**MTBF (hrs):** 386,124

**Temperature:** 30

**Environment:** GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Unit Failure Rate	Quantity	Total Failure Rate
14407517A0	Integrated Circuit	U17	43.803003	1	85.184662
14S3902500	Integrated Circuit	U18	43.803003	1	85.184662
14S4021301	Integrated Circuit	U11	43.803003	1	85.184662
14S4048501	Integrated Circuit	U12,U14	43.803003	2	146.310248
14S5812502	Integrated Circuit	U15	43.803003	1	85.184662
14S5A01400	Integrated Circuit	U16	43.803003	1	85.184662
14S5A12506	Integrated Circuit	U13	43.803003	1	85.184662
14S7035701	Integrated Circuit	U10,U8,U9	43.803003	3	203.118269
14S7140000	Integrated Circuit	U105	43.803003	1	85.184662
14S7140100	Integrated Circuit	U107	43.803003	1	85.184662
1540775082	Resistor	RP1,RP2	9.971436	2	33.285181
1654008001	Connection	CN5	16.184835	1	28.022514
1752001603	Miscellaneous	FS2	2.400000	1	3.927328
1752002700	Miscellaneous	FS1	2.400000	1	3.927328