

TKS-P20-CV01-ASG

Reliability Prediction Report (MTBF)

Summary	Failure Rate: 7767.463877 ppm MTBF: 128,742 Hours
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Issue date	Approval	Test Engineer
2013/07/18	Tom Lin	Jack Huang

Reliability Prediction (MTBF)

I . Model Name: TKS-P20-CV01-ASG

II . Prediction Date: July. 18, 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:

TKS-P20-CV01-ASG (9697CV0108-D, 9697P24D01-D):

- Failure Rate: 7767.463877 ppm
- MTBF: 128,742 Hours

**AAEON Reliability Prediction
Summary**

File Name: TKS-P20-CV01-ASG.rfp
Duty Cycle: 100
Calculation Model: Telcordia Issue 2
Method: Method I Case 3

Failure Rate: 7767.463877
MTBF (hrs): 128,742
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Assembly Name	Part Number	Ref Des	Quantity	Failure Rate	MTBF
TKS-P20-CV01-ASG	System		1	7767.463877	128,742
ASS'Y.PICO-CV01.Rev.A1.0	9697CV0108-D		1	7194.052599	139,004
ASS'Y.PER-P24D.Rev.A1.0	9697P24D01-D		1	649.213422	1,540,326

File Name: TKS-P20-CV01-ASG.rfp
Assembly: 9697CV0108-D
Ref Des:
Description:

Failure Rate: 7194.052599
MTBF (hrs): 139,004
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1050500334	Resistor	R5		2.547039	1	282340674.079668
1050501004	Resistor	R186,R187,R319		2.547039	3	107020754.986850
1050503934	Resistor	R419		2.547039	1	282340674.079668
1050504724	Resistor	R446		2.547039	1	282340674.079668
1050504764	Resistor	R401		2.547039	1	282340674.079668
1050505124	Resistor	R209,R329,R335		2.547039	3	107020754.986850
1050505134	Resistor	R139,R140,R155		2.547039	3	107020754.986850
1050507524	Resistor	R164,R397,R461		2.547039	3	107020754.986850
1050510034	Resistor	R189,R221,R240,R281,R483		2.547039	5	67008142.102588
1050511009	Resistor	R154,R383		2.547039	2	154078778.388085
1050512104	Resistor	R170		2.547039	1	282340674.079668
1050512114	Resistor	R395		2.547039	1	282340674.079668
1050513034	Resistor	R136,R148,R166		2.547039	3	107020754.986850
1050522114	Resistor	R146		2.547039	1	282340674.079668
1050524004	Resistor	R229		2.547039	1	282340674.079668
1050524904	Resistor	R3,R42		2.547039	2	154078778.388085
1050524924	Resistor	R207		2.547039	1	282340674.079668
1050531614	Resistor	R116,R188		2.547039	2	154078778.388085
1050539264	Resistor	R344,R345,R73,R81,R83,R87		2.547039	6	56573956.677649
1050561934	Resistor	R2		2.547039	1	282340674.079668
1050568034	Resistor	R467		2.547039	1	282340674.079668
1050569824	Resistor	R257		2.547039	1	282340674.079668
1050590964	Resistor	R16,R19,R24,R33		2.547039	4	82309758.689546
1050703334	Resistor	R141,R378,R61		2.547039	3	107020754.986850
1050756004	Resistor	R30,R31,R312		2.547039	3	107020754.986850
105A500139	Resistor	R115,R193,R194,R197,R198,R202,R230,R231,R320,R326		2.547039	10	35079934.879747
105A500239	Resistor	R175,R354,R393,R438		2.547039	4	82309758.689546

File Name: TKS-P20-CV01-ASG.rfp
Assembly: 9697CV0108-D
Ref Des:
Description:

Failure Rate: 7194.052599
MTBF (hrs): 139,004
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
105A501039	Resistor	R120,R121,R152, R153,R157,R174, R199,R216,R270, R358,R394,R396, R420,R460,R466		2.547039	15	23852782.943395
105A501413	Resistor	R196		2.547039	1	282340674.079668
105A501539	Resistor	R247,R459		2.547039	2	154078778.388085
105A502039	Resistor	R26,R290,R333,R493		2.547039	4	82309758.689546
105A503309	Resistor	R22,R234,R285,R287, R29,R324,R392		2.547039	7	48991237.965885
105A504763	Resistor	R415		2.547039	1	282340674.079668
105A505109	Resistor	R124,R125,R126, R398,R399,R425		2.547039	6	56573956.677649
105A507509	Resistor	R123,R379,R385, R400		2.547039	4	82309758.689546
105A510009	Resistor	R122,R176,R177, R224,R332,R384, R435,R436,R440, R441,R465		2.547039	11	32049696.385471
105A512039	Resistor	R165		2.547039	1	282340674.079668
105A515009	Resistor	R377,R382,R391,R96, R97,R98		2.547039	6	56573956.677649
105A515034	Resistor	R423,R482		2.547039	2	154078778.388085
105A522669	Resistor	R179,R43		2.547039	2	154078778.388085
105A523713	Resistor	R390		2.547039	1	282340674.079668
105A524919	Resistor	R18,R470		2.547039	2	154078778.388085
105A527403	Resistor	R183		2.547039	1	282340674.079668
105A533269	Resistor	R180		2.547039	1	282340674.079668
105A549969	Resistor	R416,R424		2.547039	2	154078778.388085
105A551119	Resistor	R429		2.547039	1	282340674.079668
105A553629	Resistor	R163,R211		2.547039	2	154078778.388085
105A556269	Resistor	R449		2.547039	1	282340674.079668
105A560469	Resistor	R289,R296		2.547039	2	154078778.388085
105A562034	Resistor	R422		2.547039	1	282340674.079668
105A568103	Resistor	R99		2.547039	1	282340674.079668

File Name: TKS-P20-CV01-ASG.rfp
Assembly: 9697CV0108-D
Ref Des:
Description:

Failure Rate: 7194.052599
MTBF (hrs): 139,004
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
105A597613	Resistor	R261		2.547039	1	282340674.079668
105A700003	Resistor	R144,R162,R191, R192,R228,R238, R256,R282,R284, R310,R402,R404, R431,R484		2.547039	14	25477245.255648
105A700009	Resistor	R103,R104,R105, R106,R107,R108, R109,R110,R111, R112,R113,R117, R118,R12,R127,R130, R137,R150,R156, R159,R160,R167, R169,R178,R195, R206,R21,R210,R226, R25,R269,R291,R313, R316,R318,R346, R351,R360,R363, R407,R408,R411, R11,R13,R134,R14, R149,R184,R205, R249,R250,R251, R268,R271,R288, R293,R295,R325, R336,R375,R381,R41, R45,R47,R473,R501, R51,R55,R6,R62,R64, R71,R74,R86		2.547039	68	5521341.955009
105A700139	Resistor	R11,R13,R134,R14, R149,R184,R205, R249,R250,R251, R268,R271,R288, R293,R295,R325, R336,R375,R381,R41, R45,R47,R473,R501, R51,R55,R6,R62,R64, R71,R74,R86		2.547039	32	11502702.879433

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Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
105A701039	Resistor	C52,R10,R101,R114,R133,R172,R255,R260,R262,R265,R278,R301,R302,R305,R317,R327,R338,R348,R359,R362,R364,R365,R366,R409,R414,R430,R44,R458,R46,R472,R474,R479,R488,R489,R503,R53,R8,R84,R85,R88,R89		2.547039	41	9043562.562696
105A701059	Resistor	R102,R158,R227,R283,R50,R94		2.547039	6	56573956.677649
105A701069	Resistor	R294		2.547039	1	282340674.079668
105A702229	Resistor	R128,R142,R151,R218,R219,R300,R311,R322,R334,R355,R368,R376,R405,R410,R417,R428,R447,R494,R495,R496,R497		2.547039	21	17274945.076062
105A702263	Resistor	R131,R232,R237,R469,R500		2.547039	5	67008142.102588
105A702269	Resistor	R457		2.547039	1	282340674.079668
105A703909	Resistor	R372,R373		2.547039	2	154078778.388085
105A704709	Resistor	R298,R304,R78		2.547039	3	107020754.986850

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Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
105A704729	Resistor	R203,R204,R220, R306,R314,R315, R330,R339,R34, R341,R342,R343, R35,R350,R353, R357,R370,R39, R63,R65,R66, R67, R68,R69,R7, R70,R75, R76,R80,R9		2.547039	30	12244464.256771
105A704739	Resistor	R168		2.547039	1	282340674.079668
105A705139	Resistor	R143,R171,R239, R241,R252,R253, R32,R371,R4		2.547039	9	38754445.632391
105A705629	Resistor	R40		2.547039	1	282340674.079668
105A708229	Resistor	R15,R17,R27, R28, R308,R331,R54, R56,R57,R58,R59, R60		2.547039	12	29507083.749401
105A710039	Resistor	R100,R129,R181, R182,R200,R222, R223,R258,R279, R337,R403,R413, R481,R506		2.547039	14	25477245.255648
105A722003	Resistor	R286,R456		2.547039	2	154078778.388085
105A722009	Resistor	R1,R323		2.547039	2	154078778.388085
105A733009	Resistor	R208,R225,R235, R236,R246		2.547039	5	67008142.102588
105A739039	Resistor	R280		2.547039	1	282340674.079668
105A747039	Resistor	R212		2.547039	1	282340674.079668
106B501032	Resistor	RT1		2.547039	1	282340674.079668

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Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1121501691	Capacitor	C100,C102,C104, C105,C106,C107, C108,C109,C11,C110, C111,C112,C116, C117,C118,C119,C12, C120,C124,C14,C140, C142,C143,C145, C147,C15,C152,C153, C154,C16,C162,C163, C164,C166,C168, C170,C172,C189, C190,C194,C199,C20, C200,C201,C203,		1.128806	114	7593257.117641
1122701680	Capacitor	C144,C347		1.128806	2	375289731.076049
1124410191	Capacitor	C26,C27,C273,C29, C31,C33,C348,C349, C35,C77		1.128806	10	82101057.548118
1124418090	Capacitor	C184,C192,C57,C58		1.128806	4	196873384.410843
1124427091	Capacitor	C13,C18,C227,C228, C236,C243,C50,C54, C55		1.128806	9	90863428.080946
1124533190	Capacitor	C324		1.128806	1	704977644.692287
1124533280	Capacitor	C241,C281		1.128806	2	375289731.076049
1124547190	Capacitor	C1,C213,C214,C231, C271,C279		1.128806	6	133979725.056342
1129522790	Capacitor	C265,C266,C267		1.128806	3	257514172.353070
1129622690	Capacitor	C115,C139,C277, C318,C322,C325, C327,C334,C346,C56, C93		1.128806	11	74892583.279796

File Name: TKS-P20-CV01-ASG.rfp
Assembly: 9697CV0108-D
Ref Des:
Description:

Failure Rate: 7194.052599
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Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1129701791	Capacitor	C10,C158,C159,C160,C161,C165,C2,C21,C226,C254,C255,C351,C352,C355,C356,C38,C39,C43,C45		1.128806	19	44097696.883526
1129710091	Capacitor	C180,C256,C264,C275		1.128806	4	196873384.410843
1129710391	Capacitor	C132		1.128806	1	704977644.692287
1181610180	Capacitor	TC7		4.744484	1	159663026.715137
1189610153	Capacitor	TC16		4.744484	1	159663026.715137
118961018A	Capacitor	TC14		4.744484	1	159663026.715137
1189610192	Capacitor	TC11		4.744484	1	159663026.715137
1189615151	Capacitor	TC10,TC13,TC15,TC8,TC9		4.744484	5	36944177.000623
1189622153	Capacitor	TC12,TC6		4.744484	2	86049450.747498
1189622154	Capacitor	TC17,TC2,TC3,TC4,TC5		4.744484	5	36944177.000623
1189922181	Capacitor	TC1		4.744484	1	159663026.715137
11C2510480	Capacitor	C185		1.128806	1	704977644.692287
11C4515190	Capacitor	C59		1.128806	1	704977644.692287
11C4522290	Capacitor	C123,C332,C353,C65		1.128806	4	196873384.410843
11E1510050	Capacitor	C155,C175,C176,C258,C260,C330,C343,C344,C9,C91		1.128806	10	82101057.548118
11E1522680	Capacitor	C63,C71		1.128806	2	375289731.076049
11E2501080	Capacitor	C137		1.128806	1	704977644.692287
11E2522060	Capacitor	C131,C186,C19,C336,C53		1.128806	5	159367490.199266
11E2601050	Capacitor	C148		1.128806	1	704977644.692287

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Assembly: 9697CV0108-D
Ref Des:
Description:

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MTBF (hrs): 139,004
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
11E9501091	Capacitor	C121,C122,C125, C126,C127,C130, C169,C174,C178, C179,C182,C183, C187,C188,C191, C193,C195,C196, C198,C202,C209, C210,C211,C212, C215,C216,C218, C220,C224,C268, C278,C282,C285, C289,C292,C294, C295,C296,C297,		1.128806	61	14072541.885825
11E9510050	Capacitor	C133,C156,C157, C205,C206,C230,C24, C293		1.128806	8	101746760.035398
11E9610080	Capacitor	C113,C114,C128, C129,C134,C135, C136,C17,C177,C197, C208,C217,C222, C232,C235,C253, C261,C262,C263, C291,C310,C342,C36, C48,C51,C60,C67, C73,C80,C84,C95, C96		1.128806	32	26512863.286539

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Ref Des:
Description:

Failure Rate: 7194.052599
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Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
11E9622080	Capacitor	C103,C138,C141, C149,C150,C181, C247,C259,C280, C286,C287,C288, C315,C333,C37,C92		1.128806	16	52112480.802928
11E9647680	Capacitor	C173,C283,C284, C300		1.128806	4	196873384.410843
11E9722090	Capacitor	C251,C257,C269		1.128806	3	257514172.353070
1211100113	Inductor	L7,L8,L9		4.944252	3	57363284.375370
1211100160	Inductor	L10		4.944252	1	154760964.143460
121110156F	Inductor	L2		4.944252	1	154760964.143460
121110156M	Inductor	L1		4.944252	1	154760964.143460
121110156M	Inductor	L5	39	9.517507	1	80396802.699206
121110226H	Inductor	L3		4.944252	1	154760964.143460
121110336W	Inductor	L4		4.944252	1	154760964.143460
121110476Q	Inductor	L6		4.944252	1	154760964.143460
1212306030	Inductor	FB1,FB11,FB16,FB18, FB19,FB2,FB20,FB22, FB25,FB28,FB3,FB30, FB31,FB4,FB5,FB6, FB7,FB8,FB9		4.944252	19	9964387.381435
1212306031	Inductor	FB24		4.944252	1	154760964.143460
1212306035	Inductor	FB10,FB12,FB13, FB14,FB15,FB17, FB21,FB23,FB26		4.944252	9	20443842.451049
1212308054	Inductor	FB27,FB29		4.944252	2	83201062.149749
123132505D	Miscellaneous	Y2,Y4		19.200000	2	8854051.752197
1231327053	Miscellaneous	Y3		19.200000	1	23844262.770939
1231332722	Miscellaneous	Y1		19.200000	1	23844262.770939
1301005443	Semiconductor	D3		7.793411	1	92807310.010983
1301005444	Semiconductor	D1,D13,D20, D21,D22		7.793411	5	21965031.404253
1301053040	Semiconductor	D27		7.793411	1	92807310.010983
1304001340	Optical Device	D14		79.003355	1	6497172.749112
1304101340	Optical Device	D15		79.003355	1	6497172.749112
1304300140	Optical Device	D2		79.003355	1	6497172.749112

File Name: TKS-P20-CV01-ASG.rfp
Assembly: 9697CV0108-D
Ref Des:
Description:

Failure Rate: 7194.052599
MTBF (hrs): 139,004
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1305080040	Semiconductor	D10,D11,D12 ,D16, D17,D18,D19 ,D26, D28,D29,D30 ,D31, D33,D4,D5,D 6,D7,D8, D9		7.793411	19	6225751.500036
1309009940	Semiconductor	D23,D24		7.793411	2	50578095.223398
1310390413	Semiconductor	Q12,Q13,Q1 4,Q25, Q26,Q6		22.463360	6	6378891.324740
1311390612	Semiconductor	Q24,Q29,Q3 4		22.463360	3	12043329.789539
1314880010	Semiconductor	Q10		22.463360	1	31642600.748419
1315230410	Semiconductor	Q45		22.463360	1	31642600.748419
1315230511	Semiconductor	Q15,Q36,Q9		22.463360	3	12043329.789539
1315443710	Semiconductor	Q7		22.463360	1	31642600.748419
1315444710	Semiconductor	Q4		22.463360	1	31642600.748419
1315667910	Semiconductor	Q21		22.463360	1	31642600.748419
1315700216	Semiconductor	Q16,Q19,Q2, Q20,Q22, Q23,Q27,Q2 8,Q3,Q30, Q31,Q33,Q3 5,Q37, Q38,Q39,Q4 0,Q41, Q44,Q5,Q8		22.463360	21	1952685.860459
1315762010	Semiconductor	Q1,Q11,Q18, Q32		22.463360	4	9270607.712006
1315970211	Semiconductor	U27,U29,U31		22.463360	3	12043329.789539
1440N26000	Integrated Circuit	U9	29.2	70.492396	1	7294578.733008
1462PICVA2	Integrated Circuit	U6		11.063278	1	58231413.220643
14S2200900	Integrated Circuit	U30		43.803003	1	11739202.588727
14S2204200	Integrated Circuit	U28		43.803003	1	11739202.588727
14S2321900	Integrated Circuit	U23		43.803003	1	11739202.588727
14S3063400	Integrated Circuit	U11		43.803003	1	11739202.588727
14S3066200	Integrated Circuit	U4	40.7	554.821104	1	926807.444136
14S3121600	Integrated Circuit	U21		43.803003	1	11739202.588727
14S3433900	Integrated Circuit	U8		43.803003	1	11739202.588727
14S3524700	Integrated Circuit	U19		43.803003	1	11739202.588727
14S3816700	Integrated Circuit	U10		43.803003	1	11739202.588727
14S3973100	Integrated Circuit	U7		43.803003	1	11739202.588727
14S4001000	Integrated Circuit	U3	27.3	257.705800	1	1995346.356486
14S4021301	Integrated Circuit	U2		43.803003	1	11739202.588727
14S4081110	Integrated Circuit	U13		43.803003	1	11739202.588727
14S4180100	Integrated Circuit	U5		43.803003	1	11739202.588727
14S4519500	Integrated Circuit	U17		43.803003	1	11739202.588727

File Name: TKS-P20-CV01-ASG.rfp
Assembly: 9697CV0108-D
Ref Des:
Description:

Failure Rate: 7194.052599
MTBF (hrs): 139,004
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
14S4811102	Integrated Circuit	U22		43.803003	1	11739202.588727
14S4814380	Integrated Circuit	U35		43.803003	1	11739202.588727
14S5912300	Integrated Circuit	U12		26.018600	1	25551442.237972
14S5920400	Integrated Circuit	U26		26.018600	1	25551442.237972
14S5A00704	Integrated Circuit	U18		26.018600	1	25551442.237972
14S5A00821	Integrated Circuit	U14,U20,U25, U34		26.018600	4	7696979.559193
14S6203205	Integrated Circuit			11.063278	1	58231413.220643
14S9341101	Integrated Circuit	U16	35.5	415.000462	1	1239064.473147
14S9811500	Integrated Circuit	U15		43.803003	1	11739202.588727
1540710382	Resistor	RP1,RP2,RP3		9.971436	3	21639329.074793
1540782282	Resistor	RP4,RP5,RP6, RP7		9.971436	4	17049357.262242
16515A2990	Connection	DIMM1		16.184835	1	35685591.360212
165251420B	Connection	CN7		16.184835	1	35685591.360212
1653003101	Connection	JP2,JP3,JP4,J P5, JP6		16.184835	5	9343344.843761
1653003201	Connection	JP1		16.184835	1	35685591.360212
1653005201	Connection	CN19		16.184835	1	35685591.360212
1653300102	Connection	JP4(2-3),JP6 (2-3)		16.184835	2	20390152.380746
1653300107	Connection	JP1(3-4),JP3 (2-3), JP5(2 -3)		16.184835	3	14515880.849373
1653300108	Connection	JP2(1-2)		16.184835	1	35685591.360212
1654020004	Connection	CN15		16.184835	1	35685591.360212
1654226303	Connection	PCIE1A		16.184835	1	35685591.360212
1654415305	Connection	CN12		16.184835	1	35685591.360212
1654808309	Connection	CN16		16.184835	1	35685591.360212
1654907004	Connection	CN5		16.184835	1	35685591.360212
1654919304	Connection	CN17		16.184835	1	35685591.360212
1654926900	Connection	PCIE1B		16.184835	1	35685591.360212
1655004020	Connection	CN6		16.184835	1	35685591.360212
1655302020	Connection	CN4		16.184835	1	35685591.360212
1655305020	Connection	CN18		16.184835	1	35685591.360212
1655902030	Connection	BAT1A,CN8		16.184835	2	20390152.380746
1655905032	Connection	CN11,CN13,C N14		16.184835	3	14515880.849373
1655906032	Connection	CN3		16.184835	1	35685591.360212
1655909031	Connection	CN1,CN2		16.184835	2	20390152.380746
1655910131	Connection	CN9		16.184835	1	35685591.360212
175011901M	Miscellaneous	BAT1B		306.000000	1	1681683.006787
1752000501	Miscellaneous	FS1		2.400000	1	254626042.602335
1752001603	Miscellaneous	FS2		2.400000	1	254626042.602335

File Name: TKS-P20-CV01-ASG.rfp
Assembly: 9697P24D01-D
Ref Des:
Description:

Failure Rate: 649.213422
MTBF (hrs): 1,540,326
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1050501234	Resistor	R34		2.547039	1	282340674.079668
1050502234	Resistor	R33,R35		2.547039	2	154078778.388085
1052730009	Resistor	R32		2.547039	1	282340674.079668
1054500589	Resistor	R11		2.547039	1	282340674.079668
1054700289	Resistor	R8		2.547039	1	282340674.079668
1059501261	Resistor	R29		2.547039	1	282340674.079668
105A501033	Resistor	R18,R20		2.547039	2	154078778.388085
105A502223	Resistor	R9		2.547039	1	282340674.079668
105A510023	Resistor	R30		2.547039	1	282340674.079668
105A510033	Resistor	R10,R12,R17 ,R26, R27		2.547039	5	67008142.102588
105A510213	Resistor	R23		2.547039	1	282340674.079668
105A510223	Resistor	R16		2.547039	1	282340674.079668
105A511513	Resistor	R22		2.547039	1	282340674.079668
105A515813	Resistor	R2		2.547039	1	282340674.079668
105A519113	Resistor	R15		2.547039	1	282340674.079668
105A545323	Resistor	R13		2.547039	1	282340674.079668
105A549923	Resistor	R24,R28		2.547039	2	154078778.388085
105A590963	Resistor	R19		2.547039	1	282340674.079668
105A593123	Resistor	R21		2.547039	1	282340674.079668
105A700003	Resistor	R1,R14,R25, R4		2.547039	4	82309758.689546
105A700203	Resistor	R31		2.547039	1	282340674.079668
105A702263	Resistor	R5		2.547039	1	282340674.079668
1121501680	Capacitor	C34		1.128806	1	704977644.692287
1122501780	Capacitor	C16,C25,C26		1.128806	3	257514172.353070
1122701680	Capacitor	C10,C3		1.128806	2	375289731.076049
1124415080	Capacitor	C29		1.128806	1	704977644.692287
1124510280	Capacitor	C19		1.128806	1	704977644.692287
1124533280	Capacitor	C14		1.128806	1	704977644.692287
1124547280	Capacitor	C1		1.128806	1	704977644.692287
1124701680	Capacitor	C18,C20,C28 ,C35, C41		1.128806	5	159367490.199266
1129610080	Capacitor	C24		1.128806	1	704977644.692287
1189922181	Capacitor	C7		4.744484	1	159663026.715137
11C1522430	Capacitor	C17		1.128806	1	704977644.692287
11C1547480	Capacitor	C32		1.128806	1	704977644.692287
11C4501380	Capacitor	C22		1.128806	1	704977644.692287
11C5501650	Capacitor	C21		1.128806	1	704977644.692287
11E1647090	Capacitor	C36		1.128806	1	704977644.692287
11E2510060	Capacitor	C2,C8		1.128806	2	375289731.076049
11E4510090	Capacitor	C37,C38		1.128806	2	375289731.076049
11E9501080	Capacitor	C27,C33		1.128806	2	375289731.076049
11E9547630	Capacitor	C30,C31		1.128806	2	375289731.076049
1211106864	Inductor	L2		4.944252	1	154760964.143460
121113307B	Inductor	L3		4.944252	1	154760964.143460
1212312063	Inductor	FB1		4.944252	1	154760964.143460

File Name: TKS-P20-CV01-ASG.rfp
Assembly: 9697P24D01-D
Ref Des:
Description:

Failure Rate: 649.213422
MTBF (hrs): 1,540,326
Temperature: 30
Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1214607890	Inductor	L1		4.944252	1	154760964.143460
1301013040	Semiconductor	D1		7.793411	1	92807310.010983
1301110040	Semiconductor	D2		7.793411	1	92807310.010983
1302008240	Semiconductor	D6		7.793411	1	92807310.010983
1305SMC360	Semiconductor	D4		7.793411	1	92807310.010983
1310222211	Semiconductor	Q5,Q6		22.463360	2	17315095.066101
1315041770	Semiconductor	Q3		22.463360	1	31642600.748419
1315058300	Semiconductor	Q4		22.463360	1	31642600.748419
1315058340	Semiconductor	Q2	34.5	53.139216	1	13376169.022630
1315493910	Semiconductor	Q1		22.463360	1	31642600.748419
1430021020	Integrated Circuit	U2		43.803003	1	11739202.588727
1430021850	Integrated Circuit	U3		43.803003	1	11739202.588727
14S9230500	Integrated Circuit	U1		43.803003	1	11739202.588727
1181627197	Capacitor	C11,C12,C13 ,C40,C5, C6,C9		4.744484	7	26949727.707925
1183610191	Capacitor	C4		4.744484	1	159663026.715137
1652202203	Connection	CN2		16.184835	1	35685591.360212
165300310G	Connection	JP1		16.184835	1	35685591.360212
165330010E	Connection	JP1(2-3)		16.184835	1	35685591.360212
1655105010	Connection	CN4		16.184835	1	35685591.360212