

ISO-9001 Certified
ISO-14000 Certified
ISO-17025 Certified
ADVANTECH CO., LTD.

QA Test Report

PCA-6751-F1B2

at

35 degree C

(Reliability Prediction)

Report No :05R084A0

Report Date : July, 20, 2005

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Reliability Prediction

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I. Date: 2005/7/20

II. Model Name: PCA-6751-F1B2

III. Revision: N/A

IV. Description: POC-S175 w/C-M600 n-L2/512MB RAM/Res.TS

V. Equipment: Bellcore Calculation Method:
Limited Stress-Method 1,Case 3.

VI: Simulated Environment:

.Environment:Ground Fix

.Temperature:35°C

.Quality:Level 1

.Follow Standard:Bellcore Calculation Method:
Limited Stress-Method 1, Case 3.

.Stress:50%

Reliability Prediction

VII. Prediction Result:

A. Failure Rate : 15,462.6779 FITs.
B. MTBF : 64,672 hours.

VIII. Index: A. Failure Rate & Assembly MTBF
B. Part Failure List

Short List Report

RelCalc for Windows, Version 5.0-BELL6 (Release 1999.1)

Company: ADVANTECH

DOC: PCA-6751-F1B2 AT 35 DEGREE C.CIR RECORDS: 148

DESCRIPTION: PCA-6751-F1B2

ENV: GF TEMP: 35.00 C CF: 1.00000 MODEL: Serial

FR= 15462.6779 FITs MTBF= 64671.8511 hrs. Parts= 737

BELLCORE CALCULATION METHOD: LimitedStress - Method I, Case 3 PIFY=3.7

PartNumber	PartType	Qty	RefDes	TotalFR	%FR
1428274125	IC,Logic	1	IC 74LS125	111.4127	0.72
14S4021300	IC,Logic	2	IC SMT 213	195.6182	1.27
14S4382300	IC,Logic	1	IC TPS3823-33	78.4839	0.51
14S4397731	IC,Logic	1	IC W83977EF	171.1168	1.11
14S4914820	IC,Logic	1	IC 9148BF-04	89.6238	0.58
14S5307400	IC,Logic	1	IC 74ALS74	97.8091	0.63
14S5801400	IC,Logic	1	IC 74HCT14	87.7236	0.57
14S5A00800	IC,Logic	2	IC 74V1G08	204.5078	1.32
14S5A01400	IC,Logic	1	IC 744VIG14	92.0410	0.60
14S5A13210	IC,Logic	1	IC 74AHCT1G32	97.0294	0.63
14S5A24560	IC,Logic	1	IC 74VHC2445FT	74.7947	0.48
14S9007500	IC,Logic	1	IC LM75 TEMPER.SENSOR	187.7167	1.21
14S8953600	IC,GateArray/PAL	1	IC XC9536	124.6797	0.81
14S4000080	IC,Micro	1	IC 69000 BGA	608.7662	3.94
14S4026600	IC,Micro	1	PENTIUM 266	1208.9667	7.82
14S4237140	IC,Micro	1	INTEL 82371EB	280.6710	1.82
14S4243910	IC,Micro	1	INTEL FW82439TX	280.6710	1.82
14S4255900	IC,Micro	1	IC INTEL 82559	266.0505	1.72
14S6032810	IC,RAM	1	IC SOJ 32K*8	514.1071	3.32
14S6164500	IC,RAM	1	IC LP61G6464BF	1033.9170	6.69
14S62020C0	IC,ROM/PROM	1	IC PLASH	502.6338	3.25
14S6334610	IC,ROM/PROM	1	IC AT93LC46	86.9804	0.56
14S3110100	IC,Linear	1	IC SC1101	35.8265	0.23
14S4000600	IC,Linear	1	IC PCDN006	90.0656	0.58
14S4048500	IC,Linear	2	IC LTC485	81.8846	0.53
2200000002	IC,Linear	1	RC PACSZ1284	107.6562	0.70
1310390410	Transistor	5	NPN 2N3904 3P	170.8045	1.10
1312441010	Transistor	1	MOSFET SI4410	120.0000	0.78
1312993410	Transistor	1	MOSFET SI9934DY	113.8697	0.74
1314101010	Transistor	2	REG US1010	420.4880	2.72
1314108410	Transistor	1	REG EZ1084CM	348.4642	2.25
1300005440	Diode	5	DIODE BAT54C	180.0000	1.16
1300103541	Diode	1	DIODE MBRD1035CTL	36.0000	0.23
1300283540	Diode	1	DIODE MMBD2835LT1	36.0000	0.23
1300414800	Diode	2	DIODE 1N4148	72.0000	0.47
1301003440	Diode	1	DIODE SK34B	26.2846	0.17
1304100040	Optoelectronic	1	LED GREEN	11.8129	0.08
1019556107	Resistor	1	560 1/10W 1% 0805 CR	2.74110	0.02
1059700301	Resistor	1	3 1/10W 5% 0805 CR	2.74110	0.02
105A507503	Resistor	3	75 1/16W 1% 0603 CR	8.22330	0.05
105A510003	Resistor	2	100 1/16W 1% 0603 CR	5.48220	0.04
105A511513	Resistor	1	1.15K 1/16W 1% 0603 CR	4.86064	0.03
105A515003	Resistor	1	150 1/16W 1% 0603 CR	2.74110	0.02
105A515403	Resistor	3	154 1/16W 1% 0603 CR	8.22330	0.05
105A516503	Resistor	1	165 1/16W 1% 0603 CR	2.74110	0.02
105A524903	Resistor	1	249 1/16W 1% 0603 CR	2.74110	0.02
105A527003	Resistor	3	270 1/16W 1% 0603 CR	8.22330	0.05
105A527403	Resistor	1	274 1/16W 1% 0603 CR	2.74110	0.02
105A551013	Resistor	2	5.1K 1/16W 1% 0603 CR	5.48220	0.04

Short List Report

RelCalc for Windows, Version 5.0-BELL6 (Release 1999.1)

Company: ADVANTECH

DOC: PCA-6751-F1B2 AT 35 DEGREE C.CIR RECORDS: 148

DESCRIPTION: PCA-6751-F1B2

ENV: GF TEMP: 35.00 C CF: 1.00000 MODEL: Serial

FR= 15462.6779 FITs MTBF= 64671.8511 hrs. Parts= 737

BELLCORE CALCULATION METHOD: LimitedStress - Method I, Case 3 PIFY=3.7

PartNumber	PartType	Qty	RefDes	TotalFR	%FR
105A554903	Resistor	1	549 1/16W 1% 0603 CR	2.74110	0.02
105A561903	Resistor	1	619 1/16W 1% 0603 CR	2.74110	0.02
105A562023	Resistor	1	62K 1/16W 1% 0603 CR	2.74110	0.02
105A700009	Resistor	19	0 1/16W 0603 CR	52.0809	0.34
105A701009	Resistor	2	10 1/16W 5% 0603 CR	5.48220	0.04
105A702209	Resistor	1	22 1/16W 5% 0603 CR	2.74110	0.02
105A702703	Resistor	4	27 1/16W 5% 0603 CR	10.9644	0.07
105A703309	Resistor	20	33 1/16W 5% 0603 CR	54.8220	0.35
105A704709	Resistor	2	47 1/16W 5% 0603 CR	5.48220	0.04
105A707509	Resistor	4	75 1/16W 5% 0603 CR	10.9644	0.07
105A710019	Resistor	20	1K 1/16W 5% 0603 CR	54.8220	0.35
105A710029	Resistor	33	10K 1/16W 0603 CR	90.4563	0.58
105A710039	Resistor	1	100K 1/16W 5% 0603 CR	2.74110	0.02
105A715029	Resistor	4	15K 1/16W 5% 0603 CR	10.9644	0.07
105A720049	Resistor	1	2M 1/16W 5% 0603 CR	16.4466	0.11
105A722009	Resistor	5	220 1/16W 5% 0603 CR	13.7055	0.09
105A722019	Resistor	1	2.2K 1/16W 5% 0603 CR	2.74110	0.02
105A722029	Resistor	1	22K 1/16W 5% 0603 CR	2.74110	0.02
105A727009	Resistor	1	270 1/16W 5% 0603 CR	2.74110	0.02
105A727019	Resistor	2	2.7K 1/16W 5% 0603 CR	5.48220	0.04
105A730009	Resistor	4	300 1/16W 5% 0603 CR	10.9644	0.07
105A733009	Resistor	1	330 1/16W 5% 0603 CR	2.74110	0.02
105A733019	Resistor	1	3.3K 1/16W 5% 0603 CR	2.74110	0.02
105A747009	Resistor	3	470 1/16W 5% 0603 CR	8.22330	0.05
105A747019	Resistor	34	4.7K 1/16W 5% 0603 CR	93.1975	0.60
105A747029	Resistor	1	47K 1/16W 5% 0603 CR	2.74110	0.02
105A747039	Resistor	2	470K 1/16W 5% 0603 CR	5.48220	0.04
105A756019	Resistor	2	5.6K 1/16W 5% 0603 CR	5.48220	0.04
105A756039	Resistor	2	560K 1/16W 5% 0603 CR	5.48220	0.04
105A782019	Resistor	2	8.2K 1/16W 5% 0603 CR	5.48220	0.04
1540710008	Resistor	9	NETR 10 1/16W 8P4R	99.3559	0.64
1540710208	Resistor	1	NETR 1K 8P4R	9.72128	0.06
1540710308	Resistor	7	NETR 10K 1/16W 8P4R	68.0490	0.44
1540727208	Resistor	3	NETR 2.7K 8P4R	29.1638	0.19
1540756208	Resistor	2	NETR 5.6K 8P4R	19.4426	0.13
1540782208	Resistor	17	NETR 8.2K 8P4R	165.2618	1.07
1541700008	Resistor	14	NETR 33 8P4R	136.0980	0.88
1541700208	Resistor	4	NETR 4.7K 8P4R	38.8851	0.25
1111610050	Capacitor	6	10UF 16V 20% EC	424.4932	2.75
1111622091	Capacitor	3	22UF 16V 20% EC	212.2466	1.37
1111622190	Capacitor	5	220UF 16V 20% EC	389.8552	2.52
1119615292	Capacitor	5	1500UF 6.3V 20% EC	649.7586	4.20
1122701050	Capacitor	4	1UF 25V 0805 MCC	23.2887	0.15
1122710490	Capacitor	210	0.1UF 25V 0603 MCC	1222.6585	7.91
1124410090	Capacitor	13	10PF 50V 5% 0603 MCC	75.6884	0.49
1124420080	Capacitor	7	20PF 50V 5% 0603 MCC	40.7553	0.26
1124422090	Capacitor	2	22PF 50V 5% 0603 MCC	11.6444	0.08
1124422190	Capacitor	2	220PF 50V 5% 0603 MCC	11.6444	0.08
1124433090	Capacitor	1	33PF 50V 5% 0603 MCC	5.82218	0.04

Short List Report

RelCalc for Windows, Version 5.0-BELL6 (Release 1999.1)

Company: ADVANTECH

DOC: PCA-6751-F1B2 AT 35 DEGREE C.CIR RECORDS: 148

DESCRIPTION: PCA-6751-F1B2

ENV: GF TEMP: 35.00 C CF: 1.00000 MODEL: Serial

FR= 15462.6779 FITs MTBF= 64671.8511 hrs. Parts= 737

BELLCORE CALCULATION METHOD: LimitedStress - Method I, Case 3 PIFY=3.7

PartNumber	PartType	Qty	RefDes	TotalFR	%FR
1124447090	Capacitor	8	47PF 50V 5% 0603 MCC	46.5775	0.30
1124510190	Capacitor	2	100PF 50V 0603 MCC	12.3548	0.08
1124510290	Capacitor	2	1000PF 50V 0603 MCC	11.6444	0.08
1124510390	Capacitor	13	0.01UF 50V 0603 MCC	75.6884	0.49
1124518190	Capacitor	20	180PF 50V 0603 MCC	116.4437	0.75
1124547180	Capacitor	2	470PF 50V 0603 MCC	11.6444	0.08
1129510390	Capacitor	1	0.01UF 1KV 10%1808 MCC	5.82218	0.04
1129701090	Capacitor	3	1UF 10V 0603 MCC	17.6801	0.11
1129710060	Capacitor	7	10UF 10V 1206 MCC	40.7553	0.26
1129747550	Capacitor	1	4.7UF 10V 0805 MCC	5.89335	0.04
1169622190	Capacitor	1	220UF 4V 4TPB220M	169.7861	1.10
1211115072	Inductive	1	1.5UH 10A	2.84286	0.02
1211127071	Inductive	1	2.7UH	2.89464	0.02
1212301000	Inductive	13	BEAD BLM11B102S	36.9572	0.24
1212301020	Inductive	36	BEAD BLM11B141S	104.2069	0.67
1212301040	Inductive	1	BEAD BLM11P300S	2.84286	0.02
1212301050	Inductive	5	BEAD BLM11P600S	14.4732	0.09
1212302000	Inductive	16	BEAD BLM21P300S	46.3142	0.30
1252900160	Inductive	1	XFMR LF8505	109.9962	0.71
1651203291	Connector	1	IC SKT PLCC 32P	30.1862	0.20
1651500002	Connector	2	S.O.DIMM SKT PLCC 144P	271.6756	1.76
1652508213	Connector	1	TERMINAL JACK	7.54655	0.05
1653002100	Connector	3	PIN 2*1P	5.65991	0.04
1653003100	Connector	3	PIN 3*1P	8.48986	0.05
1653003200	Connector	1	PIN 3*2P	5.65991	0.04
1653004100	Connector	1	PIN 4*1P	3.77327	0.02
1653004200	Connector	1	PIN 4*2P	7.54655	0.05
1653005100	Connector	2	PIN 5*1P	9.43318	0.06
1653005202	Connector	1	PIN 5*2P	9.43318	0.06
1653006100	Connector	1	PIN 6*1P	5.65991	0.04
1653025211	Connector	1	HEADER 50P	47.1659	0.31
165312022A	Connector	1	PCB SKT 20*2P	37.7327	0.24
165313222A	Connector	1	PCB SKT 32*2P	60.3724	0.39
1653205200	Connector	2	BOX HEADER 5*2	18.8664	0.12
1653220203	Connector	1	BOX HEADER 20*2	37.7327	0.24
1653413200	Connector	1	BOX HEADER 13*2	24.5263	0.16
1653417200	Connector	1	BOX HEADER 17*2	32.0728	0.21
1653910261	Connector	1	CONN. 10*2P	18.8664	0.12
1653920200	Connector	1	CONN.DF13-40DP	37.7327	0.24
1654409108	Connector	1	D-SUB CONN 9P	8.48986	0.05
1654515304	Connector	1	D-SUB CONN 15P	14.1498	0.09
1654606317	Connector	1	MINI DIN 6P	5.65991	0.04
1655003010	Connector	1	WAFER 3P	2.82995	0.02
1655204030	Connector	1	HOUSING 4P	3.77327	0.02
1655305020	Connector	1	WAFER 5P	4.71659	0.03
1659254005	Connector	1	WAFER BOX 5P	4.71659	0.03
1231*****	QuartzCrystal	2	X'TAL	300.0000	1.94
1231*****	QuartzCrystal	1	X'TAL	150.0000	0.97
1305000040	Fuse	4	POLYSWITCH 1.1A	120.0000	0.78

Short List Report

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Company: ADVANTECH

DOC: PCA-6751-F1B2 AT 35 DEGREE C.CIR RECORDS: 148

DESCRIPTION: PCA-6751-F1B2

ENV: GF TEMP: 35.00 C CF: 1.00000 MODEL: Serial

FR= 15462.6779 FITs MTBF= 64671.8511 hrs. Parts= 737

BELLCORE CALCULATION METHOD: LimitedStress - Method I, Case 3 PIFY=3.7

PartNumber	PartType	Qty	RefDes	TotalFR	%FR
1750199011	Battery	1	BATTERY	900.0000	5.82