

# PFM-C20N Reliability Prediction Report (MTBF)

Report NO : 09E070033

**07-28-2009**

Issue Date

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Manager

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Test Engineer

## Reliability Prediction (MTBF)

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I . **Model Name:** TF-PFM-C20N-A10

II . **Prediction Date:** Jul. 28, 2009

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

IV . **Predicted by:** Jessica Chou

V . **Equipment:** Relex Ver.7.3 Visual Reliability Software

### VI. Simulation Environment:

- Temperature: 24.2 degrees C
- Standard: Telcordia (Bellcore) Standard

### VII. Term and Definition:

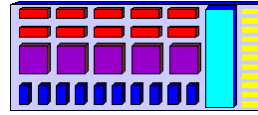
- Unit : An assembly of device.
- Duty Cycle : 100%
- Quantity : The quantity of the selected item.
- Failure Rate : Used to specify that the failure rate is to be calculated based the selected Calculation models. The multiplier is 1,000,000.
- MTBF : MTBF is always specified in hours.

### VIII. Prediction Result:

- TF-PFM-C20N-A10 :  
Failure Rate: 2.430678 ppm  
MTBF: 411,408 Hours

### AAEON Reliability Prediction Report

**Part Number** 9697C20N13-D  
**Reference Des**  
**Date** 07. 28, 2009  
**Environment** GF, GU - Ground Fixed, Uncontrolled  
**Temp. (°C)** 24.20



**Description** Top-level assembly  
**File Name** TF-PFM-C20N-A10.RPJ  
**Time** 1:44 下午  
**Failure Rate** 2.430678  
**MTBF** 411,408

Assembly Name	Part Number	Model	Method	Environment	Duty Cycle	Qty	Failure Rate	MTBF
TF-PFM-C20N-A10	9697C20N13-D	Telcordia Issue 1	Method I Case 3	GF, GU - Ground Fixed, Uncontrolled	100.00	1.00	2.43	411407.90

### AAEON Reliability Prediction Report

**Part Number** 9697C20N13-D  
**Reference Des**  
**Date** 07. 28, 2009  
**Environment** GF, GU - Ground Fixed, Uncontrolled  
**Temp. (°C)** 24.20



**Description** Top-level assembly  
**File Name** TF-PFM-C20N-A10.RPJ  
**Time** 1:44 下午  
**Failure Rate** 2.430678  
**MTBF** 411,408

Part Number	Category	Location	Calculation Model	Quality	Tem. Rise	Quantity	Failure Rate, Unit	Failure Rate, %	MTBF, Unit
1655914121	Connection	CN3	Telcordia Issue 1	Level I		1.00	0.001091	.0449	916397881.40
1129747090	Capacitor	C10,C11,C9	Telcordia Issue 1	Level I		3.00	0.005437	.6711	183922840.01
1121501680	Capacitor	C14,C15,C16,C17, C18,C21,C22,C27, C28,C29,C32	Telcordia Issue 1	Level I		11.00	0.005437	2.4605	183922840.01
1124515080	Capacitor	C19,C20,C30,C31	Telcordia Issue 1	Level I		4.00	0.004465	.7347	223980130.80
1122501780	Capacitor	C24,C25	Telcordia Issue 1	Level I		2.00	0.004465	.3674	223980130.80
1129610080	Capacitor	C26	Telcordia Issue 1	Level I		1.00	0.004465	.1837	223980130.80
1304019000	Semiconductor	D3,D4	Telcordia Issue 1	Level I		2.00	0.004532	.3729	220670511.53
1304101340	Semiconductor	D5,D6	Telcordia Issue 1	Level I		2.00	0.004532	.3729	220670511.53
1233324052	Miscellaneous	OSC1	Telcordia Issue 1	Level I		1.00	0.360000	14.8107	2777777.78
1315700212	Semiconductor	Q1,Q2,Q3,Q4	Telcordia Issue 1	Level I		4.00	0.077789	12.8012	12855269.30
1540782282	Resistor	RP1,RP10,RP11,RP12, RP13,RP2,RP3,RP4, RP5,RP6,RP7,RP8, RP9	Telcordia Issue 1	Level I		13.00	0.012042	6.4405	83041877.90
1540700081	Resistor	RP15,RP17,RP19, RP20,RP23,RP25, RP27,RP29	Telcordia Issue 1	Level I		8.00	0.000000	.0000	.00
105A700003	Resistor	R1,R123,R124,R2, R54,R82,R88	Telcordia Issue 1	Level I		7.00	0.002232	.6429	447960261.61
105A700139	Resistor	R10,R11,R12,R13,R4, R9	Telcordia Issue 1	Level I		6.00	0.002232	.5510	447960261.61
105A704729	Resistor	R14,R39,R41,R43	Telcordia Issue 1	Level I		4.00	0.002232	.3674	447960261.61
105A708229	Resistor	R15,R16,R17,R18, R19,R20,R21,R22, R23,R24,R25	Telcordia Issue 1	Level I		11.00	0.002232	1.0102	447960261.61
105A705139	Resistor	R44,R45	Telcordia Issue 1	Level I		2.00	0.002232	.1837	447960261.61
105A701033	Resistor	R46	Telcordia Issue 1	Level I		1.00	0.002232	.0918	447960261.61
105A708223	Resistor	R47,R48,R86,R87	Telcordia Issue 1	Level I		4.00	0.002232	.3674	447960261.61
105A500133	Resistor	R49,R58,R60,R62, R63,R70,R72,R74, R75	Telcordia Issue 1	Level I		9.00	0.002232	.8266	447960261.61
105A506823	Resistor	R51,R76	Telcordia Issue 1	Level I		2.00	0.002232	.1837	447960261.61
105A503300	Resistor	R52	Telcordia Issue 1	Level I		1.00	0.002232	.0918	447960261.61
105A503323	Resistor	R53,R79	Telcordia Issue 1	Level I		2.00	0.002232	.1837	447960261.61
105A512003	Resistor	R57,R85	Telcordia Issue 1	Level I		2.00	0.002232	.1837	447960261.61
105A547003	Resistor	R59,R61,R64,R65, R69,R71,R73,R77, R78,R81	Telcordia Issue 1	Level I		10.00	0.002232	.9184	447960261.61
105A533003	Resistor	R68,R80	Telcordia Issue 1	Level I		2.00	0.002232	.1837	447960261.61
105A700009	Resistor	R100,R102,R104, R106,R108,R110, R112,R114,R121, R122,R90,R92,R93, R94,R96,R98	Telcordia Issue 1	Level I		16.00	0.002232	1.4694	447960261.61
14S5824501	Integrated Circuit	U4	Telcordia Issue 1	Level I	11.80	1.00	0.048848	2.0097	20471568.86
14S5824501	Integrated Circuit	U5	Telcordia Issue 1	Level I		1.00	0.024977	1.0276	40037510.84

