

# PER-T248

## Reliability Prediction Report (MTBF)

Summary	Failure Rate: 1028.836377 ppm MTBF: 971,972 Hours
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Issue date	Approval	Test Engineer
2015/06/02	KJ Wang	Jack Huang

# Reliability Prediction (MTBF)

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**I . Model Name:** PER-T248

**II . Prediction Date:** May. 02, 2015

**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:**

PER-T248 (9697T24804-D):

- Failure Rate: 1028.836377 ppm

- MTBF: 971,972 Hours

**AAEON Reliability Prediction  
Summary**

**File Name:** PER-T248.rfp  
**Duty Cycle:** 100  
**Calculation Model:** Telcordia Issue 2  
**Method:** Method I Case 3

**Failure Rate:** 1028.836377  
**MTBF (hrs):** 971,972  
**Temperature:** 30  
**Environment:** GF, GU - Ground Fixed, Uncontrolled

Assembly Name	Part Number	Ref Des	Quantity	Failure Rate	MTBF
PER-T248	9697T24804-D		1	1028.836377	971,972

File Name: PER-T248.rfp  
 Assembly: 9697T24804-D  
 Ref Des:  
 Description:

Failure Rate: 1028.836377  
 MTBF (hrs): 971,972  
 Temperature: 30  
 Environment: GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1050500334	Resistor	R387		2.547039	1	282340674.079668
105A501039	Resistor	R6,R7		2.547039	2	154078778.388085
105A503039	Resistor	R4		2.547039	1	282340674.079668
105A512009	Resistor	R39,R44		2.547039	2	154078778.388085
105A700009	Resistor	R14,R16,R17 ,R18, R19,R22,R26 ,R36, R47,R48,R49 ,R50,R8, R9		2.547039	14	25477245.255648
105A701523	Resistor	R12		2.547039	1	282340674.079668
105A70220A	Resistor	R13,R15		2.547039	2	154078778.388085
105A702239	Resistor	R10,R11,R20 ,R21		2.547039	4	82309758.689546
105A704729	Resistor	R23,R24,R25 ,R27, R28,R29,R30 ,R31, R32,R33,R35 ,R40		2.547039	12	29507083.749401
105A747009	Resistor	R37,R51,R52 ,R53, R54,R55,R56 ,R57		2.547039	8	43225424.698300
1121501690	Capacitor	C2		1.128806	1	704977644.692287
1121501691	Capacitor	C15,C16,C17 ,C18, C19,C20		1.128806	6	133979725.056342
1124547190	Capacitor	C1		1.128806	1	704977644.692287
1129610051	Capacitor	C4,C5		1.128806	2	375289731.076049
1129722091	Capacitor	C21,C22		1.128806	2	375289731.076049
1189915180	Capacitor	C33		4.744484	1	159663026.715137
11C2410390	Capacitor	C6		1.128806	1	704977644.692287
11C9510290	Capacitor	C34		1.128806	1	704977644.692287
11E1522680	Capacitor	C8		1.128806	1	704977644.692287
11E2501690	Capacitor	C10,C11,C12 ,C13, C14,C32,C35 ,C36, C37,C38,C39 ,C40, C41		1.128806	13	63728475.410842
11E9501091	Capacitor	C23		1.128806	1	704977644.692287
11E9610080	Capacitor	C3		1.128806	1	704977644.692287
1211110062	Inductor	L1		4.944252	1	154760964.143460
12313012A0	Miscellaneous	Y1		19.200000	1	23844262.770939
1251005055	Integrated Circuit	U21	15.3	122.769547	1	4188435.505060
1301003240	Semiconductor	D1,D2,D3,D4 ,D5		7.793411	5	21965031.404253
1430015420	Integrated Circuit	U10		43.803003	1	11739202.588727

**File Name:** PER-T248.rfp  
**Assembly:** 9697T24804-D  
**Ref Des:**  
**Description:**

**Failure Rate:** 1028.836377  
**MTBF (hrs):** 971,972  
**Temperature:** 30  
**Environment:** GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Tem.Rise	Unit Failure Rate	Quantity	MTBF,Unit
1440010500	Integrated Circuit	U23,U26		43.803003	2	6834791.244197
1445F56301	Integrated Circuit	U12	13.9	19.913656	1	32351179.966563
14S3520501	Integrated Circuit	U1		43.803003	1	11739202.588727
14S4020700	Integrated Circuit	U20		43.803003	1	11739202.588727
14S7041000	Integrated Circuit	U22,U24,U25 ,U27		26.018600	4	7696979.559193
1653003101	Connection	JP2,JP3		16.184835	2	20390152.380746
165300720E	Connection	CN5		16.184835	1	35685591.360212
1653300108	Connection	JP2(1-2),JP3 (1-2)		16.184835	2	20390152.380746
1655302020	Connection	CN4,CN6,CN 7		16.184835	3	14515880.849373
1655906032	Connection	CN2		16.184835	1	35685591.360212
1655909031	Connection	CN3		16.184835	1	35685591.360212