

# RTC-700RK

## Reliability Prediction Report (MTBF)

Summary	Failure Rate: 4936.046131 MTBF: 202,591 Hours
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Issue date	QE Manager	Test Engineer
2018-09-17	KJ Wang	Anderson Lin

# Reliability Prediction (MTBF)

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**I . Model Name:** RTC-700RK

**II . Prediction Date:** Sep. 17th, 2018

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

**IV . Predicted by:** Anderson Lin

**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:**

RTC-700RK (M/B: 969770RK02-D):

- Failure Rate: 4936.046131

- MTBF: 202,591 Hours

**Reliability Prediction  
Summary**

**File Name:** RTC-700RK.rfp  
**System:** 969770RK02-D  
**Ref Des:**  
**Description:**

**Failure Rate:** 4936.046131  
**MTBF (hrs):** 202,591  
**Temperature:** 30  
**Environment:** GF, GU - Ground Fixed, Uncontrolled

Assembly Name	Part Number	Ref Des	Quantity	Failure Rate	MTBF
RTC-700RK	969770RK02-D		1	4936.046131	202,591

**Reliability Prediction  
Summary**

**File Name:** RTC-700RK.rfp  
**Assembly:** 969770RK02-D  
**Ref Des:**  
**Description:**

**Failure Rate:** 4936.046131  
**MTBF (hrs):** 202,591  
**Temperature:** 30  
**Environment:** GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Unit Failure Rate	Quantity	Total Failure Rate
	Inductor		4.944252	2	12.019077
	Capacitor		1.128806	18	21.515320
	Capacitor		1.128806	6	7.463816
	Capacitor		1.128806	1	1.418485
	Capacitor		1.128806	9	11.005528
	Capacitor		1.128806	2	2.664608
	Capacitor		1.128806	29	34.254482
	Capacitor		1.128806	2	2.664608
	Capacitor		1.128806	4	5.079407
	Capacitor		1.128806	24	28.473303
	Capacitor		1.128806	2	2.664608
	Capacitor		1.128806	2	2.664608
	Capacitor		1.128806	2	2.664608
	Capacitor		1.128806	2	2.664608
	Capacitor		1.128806	12	14.522865
	Capacitor		1.128806	4	5.079407
	Capacitor		1.128806	6	7.463816
	Capacitor		1.128806	6	7.463816
	Capacitor		1.128806	5	6.274805
	Capacitor		1.128806	9	11.005528
	Capacitor		1.128806	3	3.883281
	Capacitor		1.128806	3	3.883281
	Capacitor		1.128806	2	2.664608
	Capacitor		1.128806	2	2.664608
	Capacitor		1.128806	5	6.274805
	Capacitor		1.128806	4	5.079407
	Capacitor		1.128806	1	1.418485
	Capacitor		1.128806	2	2.664608
	Capacitor		1.128806	4	5.079407
	Semiconductor		7.793411	5	45.526910
	Semiconductor		7.793411	4	37.052017
	Semiconductor		7.793411	1	10.775013
	Semiconductor		7.793411	11	95.275401
	Semiconductor		7.793411	1	10.775013
	Semiconductor		7.793411	1	10.775013
	Semiconductor		7.793411	2	19.771405
	Semiconductor		7.793411	6	53.936113
	Capacitor		1.128806	6	7.463816
	Capacitor		1.128806	11	13.352457
	Connection		16.184835	1	28.022514
	Connection		16.184835	1	28.022514
	Capacitor		1.128806	2	2.664608
	Capacitor		1.128806	1	1.418485
	Capacitor		1.128806	2	2.664608
	Capacitor		1.128806	2	2.664608
	Capacitor		1.128806	1	1.418485

**Reliability Prediction  
Summary**

**File Name:** RTC-700RK.rfp  
**Assembly:** 969770RK02-D  
**Ref Des:**  
**Description:**

**Failure Rate:** 4936.046131  
**MTBF (hrs):** 202,591  
**Temperature:** 30  
**Environment:** GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Unit Failure Rate	Quantity	Total Failure Rate
	Capacitor		1.128806	2	2.664608
	Capacitor		1.128806	1	1.418485
	Capacitor		1.128806	3	3.883281
	Semiconductor		22.463360	6	156.767054
	Semiconductor		22.463360	4	107.867794
	Semiconductor		22.463360	20	488.678518
	Semiconductor		22.463360	8	205.039971
	Semiconductor		22.463360	2	57.753076
	Semiconductor		22.463360	1	31.602965
	Resistor		9.971436	2	33.285181
	Resistor		9.971436	1	19.377251
	Resistor		9.971436	3	46.212154
	Resistor		2.547039	84	222.750236
	Resistor		2.547039	44	118.437940
	Resistor		2.547039	7	20.411813
	Resistor		2.547039	6	17.675978
	Resistor		2.547039	62	165.475824
	Resistor		2.547039	19	52.578486
	Resistor		2.547039	16	44.592810
	Resistor		2.547039	25	68.476206
	Resistor		2.547039	3	9.343982
	Resistor		2.547039	1	3.541821
	Resistor		2.547039	4	12.149228
	Resistor		2.547039	1	3.541821
	Resistor		2.547039	11	31.201544
	Resistor		2.547039	1	3.541821
	Resistor		2.547039	1	3.541821
	Resistor		2.547039	1	3.541821
	Resistor		2.547039	32	86.936089
	Resistor		2.547039	12	33.890167
	Resistor		2.547039	3	9.343982
	Resistor		2.547039	2	6.490186
	Resistor		2.547039	1	3.541821
	Resistor		2.547039	4	12.149228
	Resistor		2.547039	2	6.490186
	Resistor		2.547039	7	20.411813
	Resistor		2.547039	1	3.541821
	Resistor		2.547039	4	12.149228
	Resistor		2.547039	2	6.490186
	Resistor		2.547039	2	6.490186
	Resistor		2.547039	1	3.541821
	Resistor		2.547039	2	6.490186
	Resistor		2.547039	1	3.541821
	Resistor		2.547039	4	12.149228
	Resistor		2.547039	1	3.541821
	Resistor		2.547039	1	3.541821



**Reliability Prediction  
Summary**

**File Name:** RTC-700RK.rfp  
**Assembly:** 969770RK02-D  
**Ref Des:**  
**Description:**

**Failure Rate:** 4936.046131  
**MTBF (hrs):** 202,591  
**Temperature:** 30  
**Environment:** GF, GU - Ground Fixed, Uncontrolled

Part Number	Category	Ref Des	Unit Failure Rate	Quantity	Total Failure Rate
	Miscellaneous		19.200000	2	112.942642
	Miscellaneous		19.200000	1	41.938810
	Miscellaneous		19.200000	1	41.938810
	Miscellaneous		19.200000	1	41.938810
	Miscellaneous		19.200000	2	112.942642