

# SOFASCO INC.

## THE TEST REPORT OF MTTF

試驗機種 SAMPLES P/N	AB18970V2MBL	試驗條件 TEST CONDITION	文件編號 DOCUNEMT NO.	QA20041215-02	
取樣數量 TESTED SAMPLES	50 PCS.	<input checked="" type="checkbox"/> 溫度 TEMP. : 70 °C <input type="checkbox"/> ON : SEC. <input type="checkbox"/> OFF : SEC. <input type="checkbox"/> 其他 OTHER :	試驗時間	開始 START	2004/10/02 08:00
試驗時間 TESTED HRS/EA	1,800 HRS		TEST PERIOD	結束 FINISHED	2004/12/15 12:00
總試驗時間 TOTAL TEST HRS	90000 HRS				

故障定義 PRODUCT SPECIFICATION & FAILURE DEFINITION      試驗結果：包含故障時間、數據、統計、...等  
 TEST RESULT : INCLUDING TIME OF FAILURE、DATUM、STATISTICS、....ETC.

1. 風扇不轉 (FAN NOT WORK.)
2. 轉速超出規格30% (ROUND SPEED OVER 30% ORIGIN.)
3. 電流超出規格30% (CURRENT OVER 30% ORIGIN.)

$(\Delta H / K) \times \left( \frac{1}{273+T_1} - \frac{1}{273+T_2} \right)$

- 溫度加速因子 TEMP A.F = 0.75
- 總試驗時間 TOTAL TEST HRS = 90000 HRS
- 查表得 (MTTF BY GEM TABLE) MTTF = 39086 HRS
- L10 = MTTF / 7
- 溫度 / TEMP. / MTTF / L10

Description :  
 1. 性能測試時點 The Time Of Check Point  
 Start , 500Hrs, 1000Hrs And Finished

$$70^{\circ}\text{C MTTF} = \frac{\text{Total test time (T)}}{\text{Total failure (r)}}$$

2. GEM TABLE  
 Generalized Exponential Model  
 (for Time-Thermiated Test level 90%)

r	0	1	2	3	4	5
M	2.3026	3.8897	5.3223	6.6808	7.99364	9.2747
r	6	7	8	9	10	
M	10.5321	11.7709	12.9947	14.206	15.4086	

溫度TEMP.	信賴水準90% CONFIDENCE LEVEL MTTF	L10
30°C	469035	67005
40°C	234518	33503
50°C	117259	16751
60°C	58629	8376
70°C	29315	4188
80°C	14657	2094

3. **MTTF**: Mean Time To Failures. The average life of product from start to totally breakdown, the failure is un-repairable and product is discarded at failure.  
**MTTF**: 平均壽命期間，只產品使用到故障不能再使用為止，產品為無法修復且因故障而丟棄。  
**MTBF**: Mean Time Between Failures. It should be used in a repairable system setting. The average interval of failure after a period of time.  
**MTBF**: 平均故障區間，使用產品於可修復的狀況下，指產品經一段時間使用，計算修復後平均每一次故障的時間有多長。  
 Usually, failure fans will not be repaired, so the fan products are suitable for MTTF report.  
 通常風扇壞掉不被更換。因此，風扇產品適用MTTF試驗報告。

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