

## SOFASCO INC. THE TEST REPORT OF MTTF

試驗機種 SAMPLES P/N	A15055V1HBLM	試驗條件 TEST CONDITION	文件編號 DOCUNEMT NO.	R-8219	
取樣數量 TESTED SAMPLE	120 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	2006/7/3 _10:00
試驗時間 TESTED HRS/EA	1,500 HRS		TEST PERIOD	結束 FINISHED	2006/9/11 _12:00
總試驗時間 TOTAL TEST HRS	180000 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)

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-Therminated Test)

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	

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

- 溫度加速因子 TEMP A.F = 2
- 總試驗時間 TOTAL TEST HR 180000 HRS
- 查表得 (MTTF BY GEM TABLE) MTTF = 78173 HRS
- L10 = MTTF / 9.5
- 溫度 / TEMP. / MTTF / L10

溫度TEMP.	信賴水準90% CONFIDENCE LEVEL MTTF	L10
30°C	1088168	114544
40°C	529231	55709
50°C	268915	28307
60°C	142275	14976
70°C	78173	8229
80°C	44559	4690
85°C	33614	3538

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。

核准 APPROVED BY: MICHAEL WANG	審查 CHECKED BY: PAUL CHEN	製表 PREPARED BY: SAM
------------------------------	--------------------------	---------------------