

SOFASCO INC.

THE TEST REPORT OF MTTF

試驗機種 SAMPLES P/N	A17051V1L-RD	試驗條件 TEST CONDITION	文件編號 DOCUNEMT NO.	QA20060318-02
取樣數量 TESTED SAMPLES	100 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
試驗時間 TESTED HRS/EA	1,600 HRS		TEST PERIOD	結束 FINISHED
總試驗時間 TOTAL TEST HRS	160000 HRS			2006/01/10 08:00
				2006/03/17 01:00

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 = 0.72
- 總試驗時間 TOTAL TEST HRS = 160000 HRS
- 查表得 (MTTF BY GEM TABLE) MTTF = 69487 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	800486	114355
40°C	400243	57178
50°C	200122	28589
60°C	100061	14294
70°C	50030	7147
80°C	25015	3574

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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