

協禧 壽命試驗報告

ADDA CORPORATION

THE TEST REPORT OF MTTF

試驗機種 Sample P/N	AD0412HX-K96(XT1)	試驗條件 Test Condition	文件編號 Document No.	QAP-MT X-313 B
取樣數量 Tested Sample	100 PCS.	☒ 溫度 TEMP. : 70 °C ☐ ON : SEC. ☐ OFF : SEC. ☐ 其他 OTHER :	試驗時間 開始 START	2012/10/31 _10:40
試驗時間 Test Time	2000 HRS		TEST PERIOD	結束 FINISHED
總試驗時間 Total Test Time	200000 HRS			2013/01/22 _11:30

故障定義 Product Specification & Faiure Definiton	試驗結果：包含故障時間、數據、統計、．．．等 Test Result：Including Time Of Failure、Datum、Statistics、... ect.																														
1.風扇不轉 (Fan Not Work)	$(\Delta H / K) \times (\frac{1}{273+Tl} - \frac{1}{273+Th})$ • 溫度加速因子 TEMP A.F = e • 總試驗時間 Total Test Time = 200000 HRS. • 查表得 (MTTF By GEM Table) MTTF = 86858 HRS. • 溫度 / TEMP. / MTTF / L10 <table><tr><th>溫度 TEMP.</th><th>信賴水準90% CONFIDENCE LEVEL</th><th>L10</th></tr><tr><td>25 °C</td><td>693841</td><td>73036</td></tr><tr><td>40 °C</td><td>324797</td><td>34189</td></tr><tr><td>50 °C</td><td>203637</td><td>21435</td></tr><tr><td>60 °C</td><td>131304</td><td>13821</td></tr><tr><td>70 °C</td><td>86858</td><td>9143</td></tr></table>			溫度 TEMP.	信賴水準90% CONFIDENCE LEVEL	L10	25 °C	693841	73036	40 °C	324797	34189	50 °C	203637	21435	60 °C	131304	13821	70 °C	86858	9143										
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2.轉速超出規格30% (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：0Hr, 500Hrs, 1000Hrs And Finished $70^{\circ}\text{C MTTF} = \frac{\text{Total test time (T)}}{\text{Total failure (r)}}$ GEM TABLE 2. Generalized Exponential Model (for Time-Terminated Test) <table><tr><td>r</td><td>0</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr><tr><td>M</td><td>2.3026</td><td>3.8897</td><td>5.3223</td><td>6.6808</td><td>7.99364</td><td>9.2747</td></tr><tr><td>r</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td><td></td></tr><tr><td>M</td><td>10.5321</td><td>11.7709</td><td>12.9947</td><td>14.2060</td><td>15.4066</td><td></td></tr></table>	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	14.2060	15.4066				
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3.Herewith, we could assume as right on the basis of above test result. Besides, if the actual test time exceed the required, it comes out that those fans' L ₁₀ expectancy and MTTF are greater than the warrant. MTTF: Mean Time To Failures. It should be used in a non-repairable system setting. Now we show the MTTF in our life report, that's because we will not repair the failed fans during life experiment. MTBF: Mean Time Between Failures. It should be used in a repairable system setting. Basically, MTBF is equal to MTTF, they use same formula to work out a life data.																															

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AD0412HX-K96(XT1)--MTTF & L10 Curve

